NEW EQUIPMENT DIGEST

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October, 1954

Volume 19—Number 10

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DETROIT

CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 112

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

NAMEPLATE TYPEWRITER
with standard typewriter keyboard

Light touch on key of the improved Automark electric typewriter for marking metal nameplates produces a clean, sharp mark by instantaneous electrical response. Up to 75 impressions per minute can be made. Machine has standard typewriter keyboard and a 1/12-hp motor on standard model, with a 1/8-hp motor optional for constant heavy duty work. Improvements include redesigned table feed mechanism with automatic shifting, line and margin spacer, increased number of type faces and automatic stopping arrangement of marking wheel. Made by **Defiance Machine & Tool Co.,** 1928 S. Vandeventer Ave., St. Louis 10, Mo.

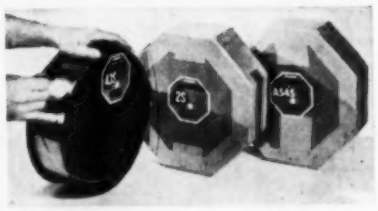
▲ For more details circle **NED-1 K4** on enclosed inquiry slip ▲

PROCESS TIMER
closes one circuit, opens another

Applications for the model TSA-21 one-knob controlled process timer include molding presses, machine tools, automatic mixing operations, starting automatic substation equipment and reclosing automatic circuit breakers. It will control timed simultaneous closing of one electric circuit and opening of another. One set of time-opening main contacts and one set of electrically separate time-closing main contacts are included. Trip point of main contacts can be externally adjusted. Set of instanteous contacts which can be used independently or as hold contacts for the timer solenoid are incorporated. Time scale is calibrated from 0 to 100 per cent. Made by **General Electric Co.,** Schenectady 5, N. Y.

▲ For more details circle **NED-2 K4** on enclosed inquiry slip ▲

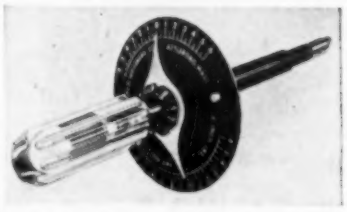
ALUMINUM WELDING ELECTRODE
for inert-gas, shielded arc welding



Maximum weld quality in inert-gas, shielded arc welding of aluminum as required in Navy specifications is assured with Alcoa I. G. consumable type electrode. It can also be used for tungsten-arc welding where filler wire is fed mechanically to the work. Offered in 2S, 43S and A54S aluminum alloys, electrode is packaged on fiber spools in 0.030, 0.040, 3/64, 1/16, 3/32 and 1/8-in. wire sizes. Mill quantity orders are available in all wire sizes from 0.020 to 1/8-in. Electrode meets AWS A5.10-54T and ASTM B-285-54T specifications. Made by **Aluminum Co. of America,** 738 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-3 K4** on enclosed inquiry slip ▲

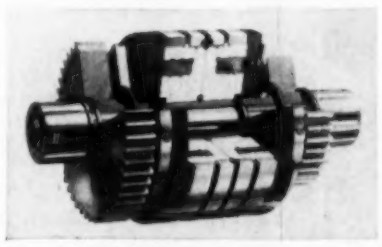
TORQUE TOOL
measures left and right hand torque



Designed for interchangeable bits, this tool can be used as torque screw driver or socket wrench. It measures both left and right hand torque. Scales are graduated from 0 to 6 lb-in. Made by **Apco Mossberg Co.,** 102 Lamb St., Attleboro, Mass.

▲ For more details circle **NED-4 K4** on enclosed inquiry slip ▲

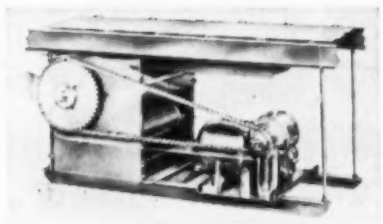
ELECTROMAGNETIC CLUTCH
for constant mesh transmissions



Constant horsepower output, quiet operation and rapid speed change are provided by the Electro clutch, an electromagnetic unit for use with transmissions employing constant mesh gearing. Control is by a 24-v dc circuit and no field adjustment of torque value of the clutch can be made. Self-compensating unit requires no adjustment for clutch plate wear. Made by **I-T-E Circuit Breaker Co.,** Rectifier Div., 1900 Hamilton St., Philadelphia 30, Pa.

▲ For more details circle **NED-5 K4** on enclosed inquiry slip ▲

CONVEYOR DRIVE & TAKE-UP
converts roller to live type



Medium duty center drive and take-up can be combined with roller gravity conveyors to form belt or live roller conveying units. Widths range from 12 to 24 in. in increments of 2 in. Wider units can be specified. Gear-head motors of 1/2 to 1 hp are furnished as standard with maximum effective pull of 300 lb. Combination unit is designed to use regular 3-ply belting. Accessory equipment includes end pulley assemblies, supports, hangers, etc. Made by **Lamson Corp.,** Dept. C18, Syracuse 1, N. Y.

▲ For more details circle **NED-6 K4** on enclosed inquiry slip ▲

HOSE CLAMPS
made from stainless in many sizes

Stainless steel Sure-Tite worm drive hose clamps can be quickly applied to hose already in position. One-piece hardened screw is deep slotted and will accommodate any size screwdriver. Compact housing permits proper band width and flexibility for leakproof sealing. Clamps are available in a wide size range, packaged ten to a carton or in a 50-clamp display package. Made by **Wittek Mfg. Co.,** 4306 W. 24th Pl., Chicago 23, Ill.

▲ For more details circle **NED-7 K4** on enclosed inquiry slip ▲

CASE COUNTER
for gravity wheel conveyors

Accurate, automatic check of number of cartons or packages passing over section of gravity wheel conveyor is provided by this Rapistan case counter. Unit fits on Rapistan 12-RS-6 or 12-RS-10 conveyors without rearrangement of wheels, or on other 12 or 18-in. wide conveyors by removing or rearranging one or two wheels. Merchandise depresses free-wheeling rollers on counter arms to actuate counter. Unit counts up to 99,999, then starts over. Knurled knob permits manual resetting. Made by **Rapids-Standard Co.,** Dept. VL, 342 Rapistan Bldg., Grand Rapids 2, Mich.

▲ For more details circle **NED-8 K4** on enclosed inquiry slip ▲

LIFT TRUCK
three actions controlled by lever

Throttle, power lift and direction are controlled with single lever on this 4000-lb capacity, gasoline-powered, rider - type lift truck with hydraulic drive and control. Steering is controlled by arm with spinner knob and will turn unit in its own length. The Handler is powered by 6-hp, single cylinder, four-cycle engine and will travel 4 mph. Platform is 24 in. wide and is available in seven lengths from 30 to 72 in. Cushioned brakes are automatically applied when lever is released. Made by **Colson Corp.,** 3704 Cedar St., Elyria, O.

▲ For more details circle **NED-9 K4** on enclosed inquiry slip ▲

SOLDERING GUN
reaches operating heat in 5 seconds

UL - approved Junior model 8100 soldering gun has trigger control and is balanced for any working position. Power rating is in excess of 100 w, and full heat is reached in 5 seconds. Gun has trigger control switch and dual spotlights which focus on work area. It is equipped with replaceable soldering tip and can be used with interchangeable tips for smoothing and cutting various materials. Standard tip will handle wide variety of jobs from soldering electronic equipment to patching small surfaces. Gun has durable plastic housing and costs $7.95. Made by **Weller Electric Corp.,** 809 Packer St., Easton, Pa.

▲ For more details circle **NED-10 K4** on enclosed inquiry slip ▲

WHETHER IT'S ORIGINAL EQUIPMENT DESIGN OR CHANGING OVER TO AIR, YOU MAY SAVE ENORMOUSLY BY STANDARDIZING ON . . .

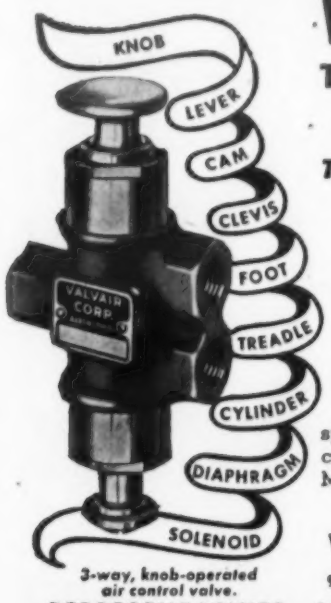
VALVAIRS

Thanks to Diversatility

★ ★ ★

ESPECIALLY ADAPTED TO TOOLING AND FIXTURE DESIGN

★ ★ ★



3-way, knob-operated air control valve.

• Valvair Diversatility is an exclusive, original form of standardization. Five basic bodies permit incorporating any one (or two) control assemblies with a standard valve body. Unique Valvair advantages enable us to speed your order at no extra cost. . . Sizes: ¼" through 1". May we fill your orders *now?*

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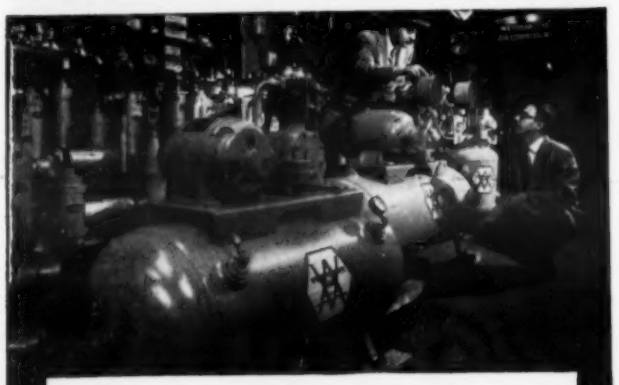
VALVAIR CORPORATION
Affiliate: Sinclair-Collins Valve Co.
947 BEARDSLEY AVE., AKRON 11, OHIO

REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon Valvair

▲ For more details circle **NED-11 K4** on enclosed inquiry slip ▲



SEE FOR YOURSELF WHY WESTINGHOUSE AIR COMPRESSORS ARE BEST! Your Westinghouse Distributor can show you the complete compressor line, and explain their special construction features.

You get a dependable air supply... with a Westinghouse Air Compressor

• If air is important in your station or shop, you want a reliable compressor. Westinghouse Air Compressors are rugged, and have many special safety features that prevent trouble. They include controlled pressure lubrication, low oil level protection and a positive starting unloader. All Westinghouse Air Compressors are factory tested.

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Manufacturers of air compressors, rock drills, engines, loaders and mixers.
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Distributed in Canada by: Canadian Westinghouse Co. Ltd., Hamilton, Ont.

REPAIR SERVICE IS FAST. When something goes wrong with your air compressor just call your Westinghouse Distributor. An experienced maintenance man will be there within a few hours.

▲ For more details circle **NED-12 K4** on enclosed inquiry slip ▲

Publicizing a New Product

Frequently, we are approached by a manufacturer that has developed a new industrial machine, process, component or material. He wants to know how he can get publicity on this product in the business press.

We recommend that he contact an established industrial advertising agency or publicity bureau. These firms know how to prepare acceptable news releases. Even more important, they know the publications that serve the fields that are a natural market for the product in question. There are hundreds of skilled advertising and publicity counsels in every major industrial area. Use of their services in obtaining publicity on industrial products is a sound investment.

If you just want your new product to appear in NEW EQUIPMENT DIGEST, the procedure is simple. Send us a brief description of it, a catalog or data sheet and a glossy photograph. Whether the item is sent to us direct or through an agency, we'll run it. Of course, the equipment must meet the needs of our readers and be made by an established manufacturer.

A. N. Gregg
EDITOR

ROTATING DRUM DRYER
dries or heats granular materials

Granular crystalline materials are dried or heated under controlled temperature conditions in this relatively high capacity rotating drum dryer. Fired with either gas or oil, unit is factory assembled with motor drive, electric controls including overheat protective device. Surge feed hopper is located above the drum to permit hot gases from fuel burning inside the drum to flow against the incoming material. This effects preheating. Variable speed ¾-hp drive allows manual selection of drum rotating speed in range of 8 to 24 rpm. Feeder disk releases measured quantity of material into drum through hopper. Since both measured feed and drum rotating speeds are adjustable independently, machine will handle wide range of raw materials. Made by **Roberts & Schaefer Co.,** 132 N. Wells St., Chicago 6, Ill.

▲ For more details circle **NED-13 K4** on enclosed inquiry slip ▲

FREE *sample of the ultimate in labeling*

Metal-Cal*

ANODIZED ALUMINUM FOIL

To keep your name or instructions before people—economically, attractively, permanently—Metal-Cals are the answer. Investigate today!

Metal-Cal
Manufactured by C & H Supply Co.
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Please send me this free sample.

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Company_____
Address_____
City_____ Zone____ State_____

*T.M. Reg. U.S. Pat. Off.

▲ For more details circle **NED-14 K4** on enclosed inquiry slip ▲

OPERATE YOUR PUNCH PRESSES SAFELY

***. . . for only* $49.50**

The Simplex Safety Lock is the *best* and *lowest* priced Safety Lock on the market. It attaches to any foot trip press and makes it impossible for the operator to injure his hands. *Sturdily built — dependable!* Foot treadle cannot be depressed unless both left and right buttons are pressed. This requires use of both hands, removing them from the danger area. Finger touch unlocks treadle.

Lock can be disengaged for strip feeding and disengaging lever can be padlocked. This positive safety device will not interfere with handling of material or changing of dies.

A free trial will convince you that the Simplex Safety Lock saves time, money and hands. Write today!

TEN-TEX CORPORATION
1211 E. 23rd St., Chattanooga 8, Tenn.

▲ For more details circle **NED-15 K4** on enclosed inquiry slip ▲

Browning's **NEW CHAIN COUPLING**

STRONG AS THE SHAFT ITSELF!

No reboring . . . simple assembly . . . individually packaged

Browning's chain coupling with pearlitic malleable sprockets, hardened teeth and standard roller chain provides maximum capacity and longer life. Employs same split taper compression bushing used in other Browning power transmission products. Strong as the shaft itself! Choice of 9 stock sizes, 38 bores from your Browning distributor. Ask him or write us for Catalog V169.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

▲ For more details circle **NED-16 K4** on enclosed inquiry slip ▲

New Catalog of Precision RUBBER PARTS

. . . by Stalwart

If you have a rubber part problem . . . SEE STALWART FIRST! Here's a 16-page multi-colored and illustrated catalog that explains Stalwart's ability to mass-produce custom engineered rubber parts. Hundreds of rubber stocks are charted for physical properties as well as the extreme temperature resistant Silicones. Sections of catalog indicate methods of fabrication and indicate processes by which various parts should be produced for maximum performance at the most economical price.

Write today for catalog No. 51SR-1 for complete information.

5040-SR

STALWART RUBBER COMPANY

Mfg. Plants in Bedford, Ohio and Jasper, Georgia
Main Offices 151 Northfield Rd., Bedford, Ohio

▲ For more details circle **NED-17 K4** on enclosed inquiry slip ▲

KOOLSHADE

HERE IS A NEW SOLUTION TO AN OLD LIGHTING PROBLEM . . .

A shade of moulded asbestos and other non-inflammable materials, quickly and easily secured to bench or machine lights.

Fits deep drawn reflectors; may be trimmed to fit shallow reflectors without sacrificing the insulating efficiency.

An inexpensive and practical way to prevent injury and loss of time due to contact with hot light reflectors.

Price 90c. Available immediately for bulb shaped reflectors; available soon for round or parabolic reflectors

The H&H Products, Inc.
LOGANSPORT, INDIANA

For more details circle NED-18 K4 on enclosed inquiry slip

LONGER LIFE . . GREATER EFFICIENCY . . IMPROVED COMFORT . . LOWER COST!

When you buy screen rooms it pays to get HIGHEST GUARANTEED ATTENUATION to take care of the future as well as present needs. Due to exclusive construction features, Lindgren true-isolated, double shielded BRONZE Screen rooms offer high attenuation (128 DB) at lower cost than cell rooms rated below 100 DB. Bronze lasts much longer, costs less and is self ventilating through open mesh. Also available in Copper up to 146 DB.

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Meets U. S. Gov't performance specifications
CONSISTENTLY HIGHEST ATTENUATION
"In our experience, your screen rooms consistently showed highest attenuation."
—(Engineering Report.)

Gives construction diagrams, complete specifications, photos, sizes, prices, performance charts, engineering reports . . . everything you need to know to buy Screen Rooms intelligently. Send for "Screen Rooms" of Quality, before you decide your screen room purchase. Write Dept. N.

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4515-17 N. RAVENSWOOD AVE. CHICAGO 40, ILL.

For more details circle NED-19 K4 on enclosed inquiry slip

WEIGH IT ON THE WAY!

make every crane a scale . . . *with* MARTIN-DECKER CRANE WEIGHT INDICATORS

TYPE SB-10 (Illustrated) Combination Load & Radius Indicator with Capacities up to 200,000 lbs.
TYPE S-12 Load Indicator with Capacities up to 200,000 lbs.
TYPE S-6 Low Priced Load Indicator with Capacities up to 50,000 lbs.

TYPE SB-10

These dependable, sensitive, yet rugged weight measuring devices are used throughout the world on Boom Cranes, Bridge Cranes and Overhead Hoists. Piston actuated, the Indicating Scale reads direct on dials. Guaranteed Accuracy of 1% of the Maximum Dial Reading.

Write Dept. NED-S-6 for descriptive literature.

MARTIN-DECKER CORP.
HOME OF THE WEIGHT INDICATOR — LONG BEACH, CALIFORNIA

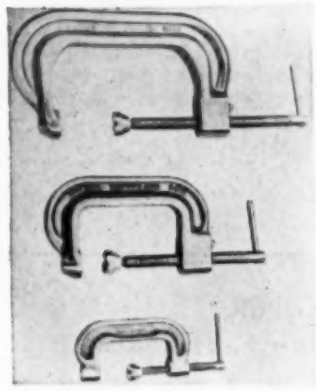
For more details circle NED-20 K4 on enclosed inquiry slip

TORQUE METER
measures 0.01-20 oz-in. loads

Starting and moving torque for servo-mechanisms, potentiometers, variable condensers and small rotating machinery can be measured by the Torque-Watch, a direct reading torque meter. The 7-oz, $1\frac{1}{8}$ x $3\frac{7}{16}$-in. instrument has a Jacobs chuck which accepts shafts up to $\frac{1}{4}$-in. diameter. Model 6000-1 registers 0.01 to 1.2 oz-in., while model 6000-2 measures 1.0 to 20 oz-in. Repeatable accuracy is ± 5 per cent on the 300-degree watch type face. Made by **Waters Mfg., Inc.**, 4 Gordon St., Waltham 54, Mass.

For more details circle NED-21 K4 on enclosed inquiry slip

ALUMINUM C-CLAMP
parts are easily replaced



Made of aluminum alloy, this C-clamp is lightweight, durable and resists adherence of weld spatter. All parts are replaceable including copper-plated screw with handle, fast-action nut, pressure spring and copper-plated shoe. Pressing on quick-acting nut permits the screw to approach work surface for instant tightening action when handle is turned. Clamp is good conductor of electricity for use as ground. Made by **Jergens Tool Specialty Co.**, Dept. NED, 712 E. 163rd St., Cleveland 10, O.

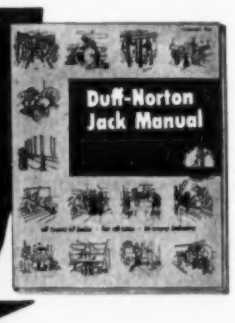
For more details circle NED-22 K4 on enclosed inquiry slip

SAND BLASTING MACHINE
has full-width viewing glass

Three stock sizes of 18 x 24, 30 x 36 and 24 x 60 in. and built to order units are available in line of redesigned sand blasting machines. All feature full-width viewing glass, enclosed cabinet and movable nozzle. Automatic feed for such small parts as bolts and nuts is also available. Made by **Leiman Bros., Inc.**, 167-A Christie St., Newark 5, N. J.

For more details circle NED-23 K4 on enclosed inquiry slip

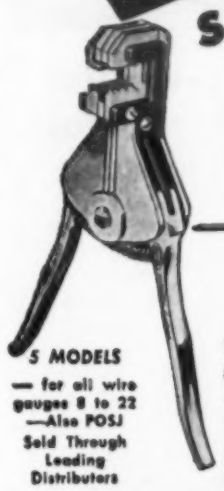
How to Reduce Jacking Costs!



Do you know about the new power jacks? The remote controlled hydraulic jacks? Jacks that lower loads automatically, safely and quickly? Do you know how to select the right jack for the job at hand? How to instruct workmen on the safe use of jacks and how to keep jacks in good working order? Duff-Norton, the world's oldest and largest manufacturer of all types of lifting jacks for every industrial use, has just published a new 40-page, illustrated jack manual—the most complete encyclopedia on the subject of lifting jacks ever attempted. This new manual contains complete specifications on more than 300 different types and sizes of ratchet, screw, and hydraulic jacks from 3 to 100 ton capacities, both manual and power operated. It contains 40 pages of useful information that will enable you to get lifting, lowering, pushing and pulling jobs done faster, safer, at lower cost. Write today for your copy of Bulletin 204-N. It's yours for the asking! **The Duff-Norton Manufacturing Co. P. O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.**

For more details circle NED-24 K4 on enclosed inquiry slip

ONE light squeeze STRIPS WIRE in 2 seconds!



IDEAL Stripmaster®
Patented, No. 2,523,936

Fastest for all Light Stripping . . . Can't Crush Wire

Unique design gives "trigger-quick" action. Strips up to $\frac{7}{8}$-inch. "Automatic" feature prevents crushing of stranded wire. Blade can be changed in a jiffy. Weighs only 10 oz.

5 MODELS — for all wire gauges 8 to 22 —Also POSJ Sold Through Leading Distributors

SEE ALSO THE IDEAL "E-Z AUTOMATIC" FOR HEAVY DUTY STRIPPING

OTHER WIRING TOOLS
- ☐ Voltage Testers
- ☐ Fish tape, reels and pullers
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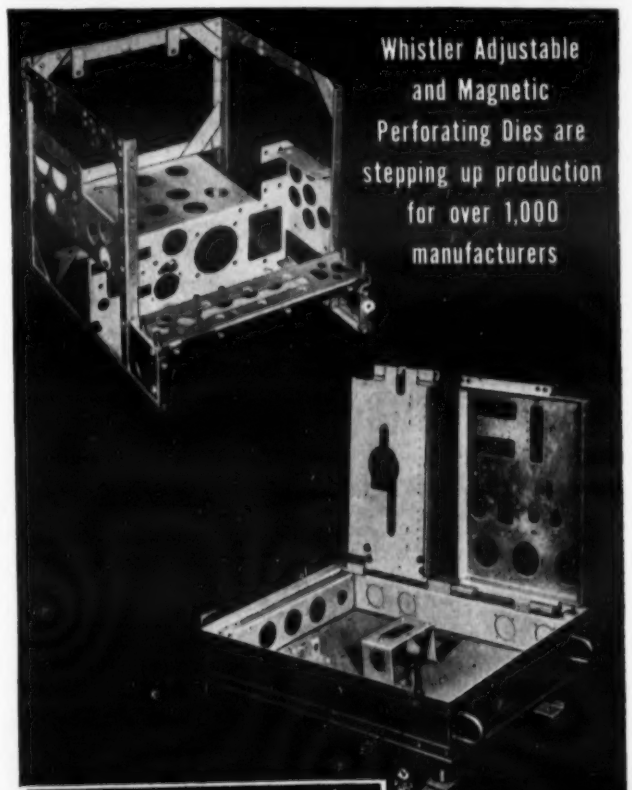
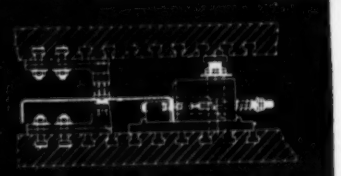
1032 Park Avenue, Sycamore, Illinois
Please send free catalog information on Stripmaster and other wiring tools as checked.
Name.....
Company.....
Address.....
City.....Zone.....State.....

For more details circle NED-25 K4 on enclosed inquiry slip



Simplify Complicated Piercing Operations



Use this HU-50 90° Perforating Unit on the same job with other Whistler Dies . . . often saves extra press operations.

USE WHISTLER Adjustable and Magnetic Dies for perforating, notching and slotting sheet metals . . . fast, accurate and cost cutting. Complicated patterns can be set up quickly. Hole arrangements can be changed in the press . . . without waiting and at no extra die cost. New HU-50 units, that pierce at 90° angle, can be used in conjunction with standard perforating equipment. Fewer press operations are necessary.

Re-use the same dies in different arrangements on many jobs. Punches and dies are interchangeable.

Whistler Adjustable Dies can be used in practically every type press. Standard sizes and shapes of punches and dies available up to 3 inches. Special sizes and shapes to order.

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750 Military Road
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"Demonstrations Daily Booth 135—Metal Show Nov. 1 to 5"

For prices and application data on this modern way to speed production and cut unit costs, write for these illustrated Whistler catalogs.

For more details circle NED-26 K4 on enclosed inquiry slip

Saves You Money On All Portable Drilling Operations

GUID-O-DRIL

Pronounced "Guide O Drill"

true holes-vertical horizontal at an angle

anywhere, in anything that can be drilled!

not a spirit level

but an accurately engineered attachment that increases the profitable productivity of any portable drill, electric or pneumatic

THE HIGH STANDARD MANUFACTURING CORP.
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HAMDEN • CONNECTICUT

$6.95 from your supplier or write for folder

For more details circle NED-27 K4 on enclosed inquiry slip

NEW EQUIPMENT DIGEST

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

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For more details circle NED-32 K4 on enclosed inquiry slip

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THE NEW CHEMICAL FUEL OIL ADDITIVE

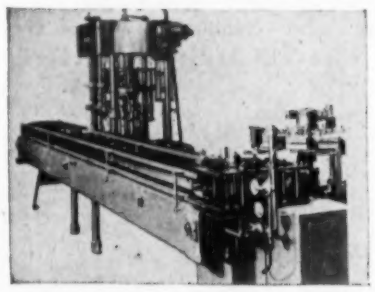
★ BURN UP TO 12% LESS FUEL OIL
★ INCREASE COMBUSTION
★ CLEAN OUT SLUDGE
★ KEEP FEED LINES, NOZZLE CLEAN

BROOKS Chemicals, Incorporated
3304 East 87th St. Cleveland, Ohio
Plants at CLEVELAND, OHIO and HAMILTON, ONTARIO
Offices in Principal Industrial Cities
QUALITY SERVICE THROUGH SCIENTIFIC RESEARCH

For more details circle NED-28 K4 on enclosed inquiry slip

PACKAGE FILLER-SEALER

12-station machine heat seals containers filled with any liquid

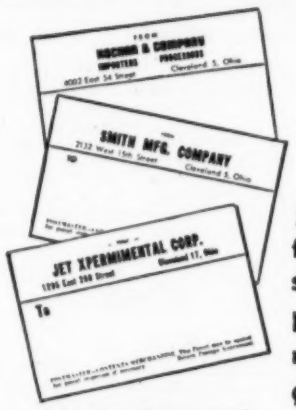


All types of liquid products can be dispensed into Bracon plastic containers by this automatic machine which also heat seals the closures. Production speeds as high as 120 per minute are possible. Containers are fed into specially designed holders on a chain-driven conveyor which carries them into a 12-station rotary unit for filling by gravity, vacuum or pressure.

Entire filling mechanism is above the conveyor. After filling, containers are fed into a 12-station rotary heat sealing unit, speed of which is synchronized with that of the filling unit. All parts of machine coming in contact with filling material are made of stainless steel. Equipment is available for fully automatic or semiautomatic operation and can be furnished for collapsible plastic tube heat sealing. Made by **MRM Co.**, 193 Berry St., Brooklyn 11, N. Y.

For more details circle NED-30 K4 on enclosed inquiry slip

IMAGINE! 5000 SHIPPING LABELS



Printed on Supercoated White Gum Paper

3"x5" Red or Blue Ink Flat or Padded

$11.95

F.O.B. Cleveland
10-Day Delivery

Money cheerfully refunded if not completely satisfied.

Dun and Bradstreet rated.

Quotations gladly given on labels requiring cuts and special sizes.

Check or Money Order Must Accompany All Orders

CARNEGIE HALL PRINTCRAFT
Printing That Talks—Since 1933
1440 WEST THIRD STREET, CLEVELAND 13, OHIO

For more details circle NED-33 K4 on enclosed inquiry slip

EFFICIENT Electric HEAT GIVES YOU $$$ SAVINGS

CHROMALOX Electric HEATERS

SAVE MONEY, TIME AND LABOR WITH THESE EFFICIENT AND PROVED HEATING UNITS

If you use heat in your production line, processes or products, Chromalox Electric Heaters can most likely point the way to added savings through increased efficiency, lowered costs, decreased working time. See for yourself how Chromalox Heaters can go to work so easily in your plant.

GET THIS BOOKLET—IT TELLS YOU HOW

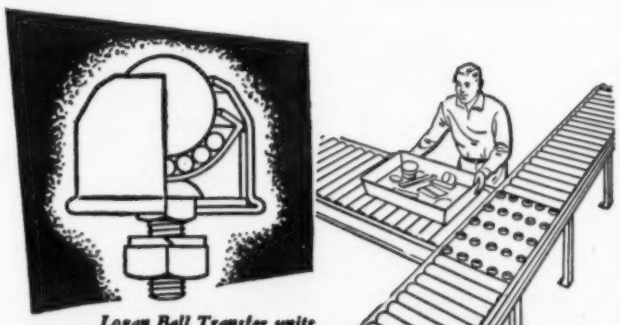
EDWIN L. WIEGAND CO., Industrial Division
7509 THOMAS BLVD., PITTSBURGH 8, PA.
Send me the illustrated booklet "101 Ways To Apply Electric Heat."
Name
Company
Street
City Zone
State
I use heat for
10-12

CHROMALOX

See other ad on Pg. 75

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-29 K4 on enclosed inquiry slip



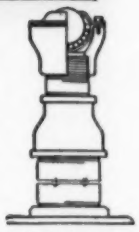
Logan Ball Transfer units consist of a large steel ball which rotates on a bed of small balls contained in a hardened steel cup.

BALL TRANSFERS

Logan Ball Transfers are handling equipment, designed primarily for use in transferring at right angles or where it is desired to rotate packages without lifting. Can be adapted to other applications. You can buy separate ball assemblies from stock or complete tables made-to-order.

Logan offers Ball Transfer units in several different sizes.

Further information on request.



Ball Pedestal units also available for handling sheets and plates.

Logan Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KY.

For more details circle NED-31 K4 on enclosed inquiry slip

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling—Saves Die Costs Saves on Expensive Presses

This efficient machine is useful in all lines of trade, spring plants, radio and electrical equipment manufacturers. Complete with tooling, for bending material up to 1/8" x 1 1/2".

No. 5 HAND OPERATED MODEL

AIR OPERATED MODELS AVAILABLE IN THIS AND LARGER SIZES

FIVE-IN-ONE-TOOL—ALSO LARGER MODELS
IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

For more details circle NED-34 K4 on enclosed inquiry slip

WHEN R-B Punches Are Used

What are your piercing or forming requirements—standard or unusual shapes—small or large holes—steel or special alloys—thin or thick metals? There is either an R-B punch in standard shapes and sizes or R-B will manufacture special punches, die buttons and retainers to your specifications that will provide more efficient piercing operations.

Many hole-making applications, formerly requiring drilling or some other costly means, can now be done with R-B interchangeable punches. If you have thought your piercing jobs too tough for interchangeable punches, it will pay you to investigate the wide application potential of R-B standardized equipment.

R-B Engineering Service Is Available for Your Tough Piercing Problems.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 73 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

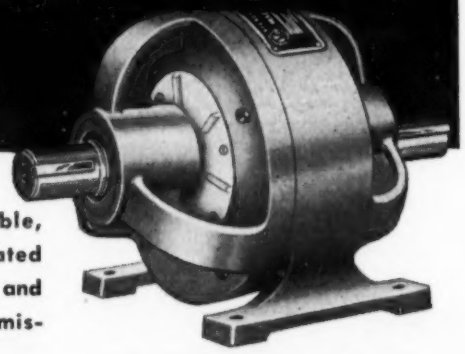
Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

▲ For more details circle **NED-35 K4** on enclosed inquiry slip ▲

... new

*Vickers Magneclutch**

*Trade Mark



for dependable, easily regulated torque control and power transmission

10-45-100-200-LB. FT. MODELS AVAILABLE FOR IMMEDIATE DELIVERY

VICKERS MAGNECLUTCH offers you these outstanding advantages*

SMOOTH OPERATION
No grab or chatter

LONG LIFE
No wear on torque transmitting surfaces

TORQUE AT ZERO SLIP
Torque transmitted 100% without mechanical lockup

TORQUE LIMITING
Torque easily adjustable from minimum to full rated torque

EXTREMELY FAST RESPONSE
SMALL CONTROL POWER
EASILY ADAPTED TO REMOTE CONTROL

VICKERS MAGNECLUTCH may also be used for braking and tension control. Get the complete facts. Write today for new bulletin and application data forms.

VICKERS ELECTRIC DIVISION
VICKERS Inc.
A UNIT OF THE SPERRY CORPORATION
1813 LOCUST STREET • SAINT LOUIS 3, MISSOURI

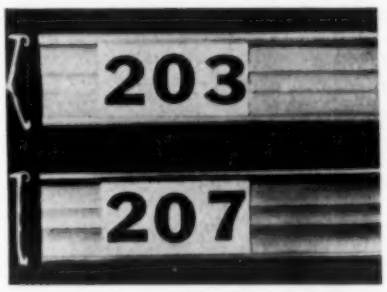
▲ For more details circle **NED-36 K4** on enclosed inquiry slip ▲

POWER LINE FAULT FINDER
usable on more than one voltage

Voltage selector switch on Universal model 54 Brunt Faultfinder, a portable ground detector and fault locator for energized power lines, enables it to be used on 120, 240, 480 or 550-v ac or ungrounded dc voltages. The one-man operated instrument locates grounds without interfering with continuous production. In use, it transmits audible signal over line until fault is reached, at which point signal dies out. Signal enables fault finder to be used in dark or inaccessible locations and for tracing overhead or buried lines. An insulated extension pole makes ladder-climbing unnecessary. Made by **Parr Mfg. Corp.**, Dept. A, 44 Austin St., Newark 5, N. J.

▲ For more details circle **NED-37 K4** on enclosed inquiry slip ▲

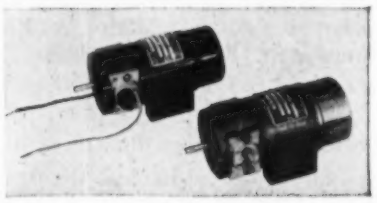
EXTRUDED ALUMINUM SHAPES
prevent loss of item price tags



These functional extruded aluminum shapes are designed to prevent the moving of pricing information when placed in position for items to be sold. They are practical for stock rooms or warehouses where the description or item numbers would be used for identification or prices. Shown are only two of 14 sections which are made in approximately ten different dimensions. Made by **Youngstown Mfg., Inc.**, Dept. W, 66-76 S. Prospect St., Youngstown 6, O.

▲ For more details circle **NED-38 K4** on enclosed inquiry slip ▲

TACHOMETER-GENERATORS
and motor of permanent magnet type



Only $3\frac{11}{16}$ in. long by $1\frac{3}{4}$ in. diameter and weighing under 20 oz, series of compact direct current motors and tachometer-generators of permanent magnet type are suitable for airborne and other applications. As continuous duty motors from 1/30 to 1/100-hp they operate on voltages from 6 to 27.5 and from 3000 to 9000 rpm. As tachometer-generators their outputs are from 0.46 to 2.4 v dc per 100 rpm up to 9000 rpm. Made by **Instrument Motors**, Dept. NED, P. O. Box 5, Stamford, Conn.

▲ For more details circle **NED-39 K4** on enclosed inquiry slip ▲

ELECTRAN

Multi-Purpose Step-Down **TRANSFORMERS**

... one transformer or a HUNDRED

Same day delivery from our stock. From 0.1 to 5.0 K.V.A. Ten standard types plus special variations to meet your specific conditions. A transformer you can depend on from a maker you can depend on!

(We have never yet been notified of a field failure of any of these units unless overloaded or otherwise incorrectly used.)

Write for bulletin 47D

ELECTRAN MFG. CO.
1901 CLYBOURN AVENUE • CHICAGO 14, ILLINOIS

▲ For more details circle **NED-40 K4** on enclosed inquiry slip ▲

The New Plastic Antifatigue Matting

KORALITE
COPYRIGHTED

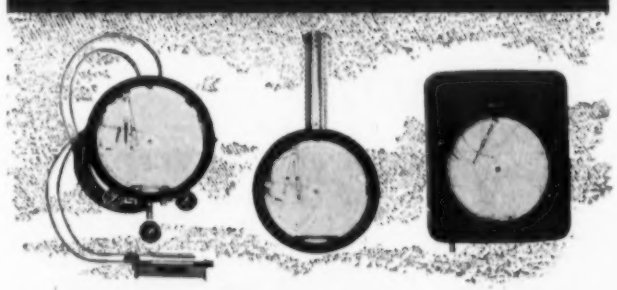
RESISTS: Water, Oil, Corrosives, Chemicals
ABSORBS BODY SHOCK 100%

This all-plastic KORALITE Antifatigue Matting, ¼" closed cell plastic sponge permanently bonded to ⅛" corrugated plastic top, overall ⅜" thick, gives foot-comfort, eliminates standing fatigue, and provides slipproof safety. For use around machines, in front of benches and equipment, at lab tables, behind counters—in fact, anywhere liquids, dampness or chemicals are an underfoot hazard. Comes in Black or Maroon Top; widths of 18, 24 or 36 in. Any length up to 100 ft. Only $1.50 per sq. ft.

ACE LITE-STEP CO.
1712 S. STATE ST. CHICAGO 16, ILL.

▲ For more details circle **NED-41 K4** on enclosed inquiry slip ▲

WIDEST RANGE OF EQUIPMENT FOR
HUMIDITY RECORDING



No matter what problems you face in obtaining suitable humidity measurements and records, the unique versatility of Foxboro Humidity Instrumentation offers an appropriate solution. Included are Recorders, Recorder-Controllers, Indicators, for relative humidity (hygroscopic type), wet-and-dry bulb measurements, and for direct reading dewpoint or absolute humidity measurement (with the exclusive Dewcel element). Available in portable, close-coupled and long-distance types; with round or rectangular cases.

Write for full details in Bulletins 188-5 and 407. **The Foxboro Company, 6610 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO HUMIDITY INSTRUMENTS

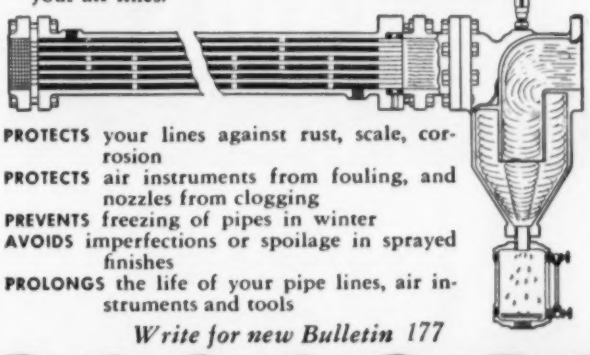
▲ For more details circle **NED-42 K4** on enclosed inquiry slip ▲

You Can be Sure of Clean Dry Air for your Compressed Air Tools

3500 Gallons
1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

with ADAMS Aftercooler and Cyclone Separator

● Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



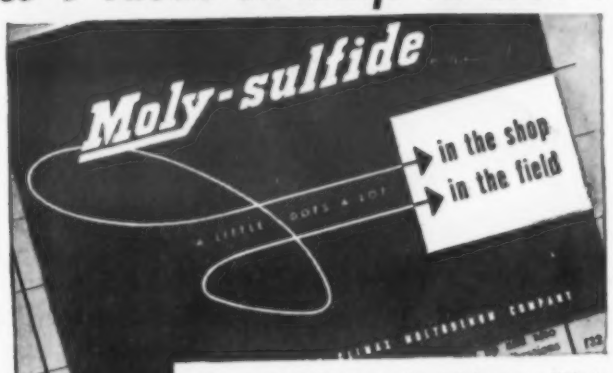
PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 177

R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

▲ For more details circle **NED-43 K4** on enclosed inquiry slip ▲

154 ideas on ways to use...



154 varied applications of molybdenum sulfide in the shop and in the field are described in a new booklet now available. This solid-film lubricant has demonstrated unique anti-friction properties under conditions of extreme pressure, high velocity, elevated temperature, or chemical attack.

The 40-page booklet contains the records of solved lubrication problems—some might solve your own. Write now on your business letterhead for this booklet.

Moly-sulfide
A LITTLE DOES A LOT

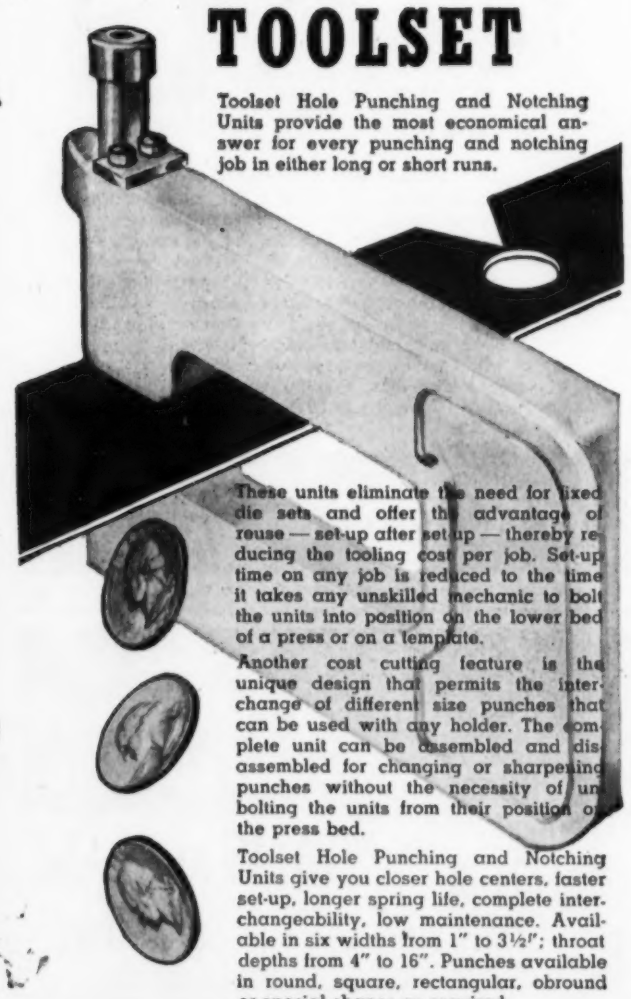
The lubricant for extreme conditions

MS-6A

Climax Molybdenum Company
500 Fifth Avenue, New York City 36, N.Y.

▲ For more details circle NED-44 K4 on enclosed inquiry slip ▲

PROFIT with every punch with TOOLSET



Toolset Hole Punching and Notching Units provide the most economical answer for every punching and notching job in either long or short runs.

These units eliminate the need for fixed die sets and offer the advantage of reuse — set-up after set-up — thereby reducing the tooling cost per job. Set-up time on any job is reduced to the time it takes any unskilled mechanic to bolt the units into position on the lower bed of a press or on a template.

Another cost cutting feature is the unique design that permits the interchange of different size punches that can be used with any holder. The complete unit can be assembled and disassembled for changing or sharpening punches without the necessity of unbolting the units from their position on the press bed.

Toolset Hole Punching and Notching Units give you closer hole centers, faster set-up, longer spring life, complete interchangeability, low maintenance. Available in six widths from 1" to 3½"; throat depths from 4" to 16". Punches available in round, square, rectangular, obround or special shapes as required.

TOOLSET
Division of General Riveters Inc.
779 Hertel Ave. Buffalo 7, N. Y.

Start cutting costs NOW — Send coupon for Catalog of complete Toolset Line.

Toolset, Division of General Riveters, Inc.
779 Hertel Ave.
Buffalo 7, N. Y.

Gentlemen:
Please furnish a copy of your Catalog on Hole Punching and Notching Units.

Name _____
Title _____
Firm _____
Address _____
City _____ Zone ____ State _____

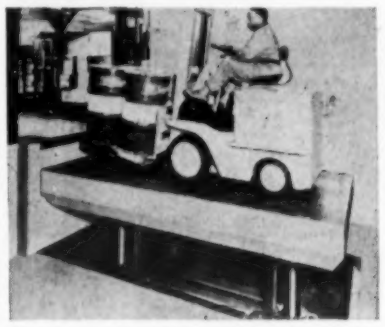
▲ For more details circle NED-45 K4 on enclosed inquiry slip ▲

MATERIALS HANDLING TRAYS nest empty or stack when filled

Mass-produced Nestier No. 224 materials handling trays are designed to tier in rigid stacks so that large loads can be handled on skids or pallets. Offered in 18-gage steel or 0.064-in. aluminum, trays measure 22¾ in. long, 4¼ in. high and 11 in. wide. They weigh 7 and 3½ lb, respectively. Plastic or fiberboard inserts are available to form compartments in tray to protect fragile or highly finished parts from damage. When trays are tiered, each unit rests on upraised handle of tray below. This protects contents which are both visible and accessible. When empty, handles swing aside and units nest compactly for ease of handling or storage. Made by **Chas. Wm. Doepke Mfg. Co.,** 8884 Blue Ash Rd., Rossmoyne, O.

▲ For more details circle NED-46 K4 on enclosed inquiry slip ▲

HYDRAULIC ELEVATOR lifts 6-ton loads 5 ft 5 in.



Now available as standard unit, model 501E Levelator Lift incorporates dual-jack hydraulic mechanism which handles loads weighing up to 12,000 lb. It raises loads from plant floor to trucks or different floor levels to speed truck loading and in-plant handling. Nonskid 6 x 12-ft steel platform is large enough to accommodate a loaded industrial power truck. Platform is part of floor in lowered position, and maximum elevation is 5 ft 5 in. above floor level. Compact Oildraulic power unit supplies controlled pressure for this unit which can be installed easily in new or existing buildings. Made by **Rotary Lift Co.,** 1011 Kansas St., Memphis 2, Tenn.

▲ For more details circle NED-47 K4 on enclosed inquiry slip ▲

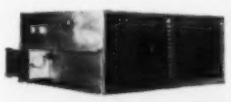
Industrial Service Pumps

Deming Co.—108-page illustrated "Industrial Catalog I-54" describes practically every industrial pump made by Deming and covers features, performance and selection. Additions to line include large capacity deep well submersible pumps for 4 and 6-in. ID wells; two-bearing end suction centrifugal pumps; Motormount centrifugal pumps for sprinkling and air conditioning applications; and units for boiler feed service.

▲ For more details circle NED-48 K4 on enclosed inquiry slip ▲

Highest Capacity at Lowest Cost...

TYPE E: Quickly installed; evaporates up to 3 gph with ¼ hp motor; ideal for small areas.



TYPE BA: Extremely versatile, for large areas. Water or steam units with capacity to 30 gph.

BAHNSON HUMIDIFIERS
A TYPE FOR EVERY INDUSTRIAL NEED

- Fully automatic
- Trouble-free
- No floor space
- Any capacity
- Free, complete engineering service

Write for specific recommendations, or get details on complete line in Catalog N-3

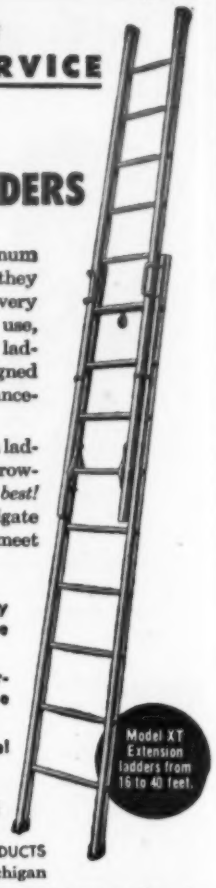
Bahnson COMPANY
WINSTON-SALEM, N. C.

AIR CONDITIONING • HUMIDIFICATION

▲ For more details circle NED-49 K4 on enclosed inquiry slip ▲

FOR A LIFETIME OF RUGGED SERVICE

Featherlite ALUMINUM LADDERS



LIGHT and strong Featherlite all-aluminum ladders make the job *easier, safer*—and they actually cost you *less!* Job-engineered for every industrial construction and commercial use, Featherlites are *much stronger* than wood ladders at only ⅓ the weight! They're designed and built to give you a lifetime of maintenance-free service at a low net cost!

America's most *complete* line of aluminum ladders, Featherlites are specified by a fast-growing number of firms who insist on the *best!* Before you buy your next ladder investigate the Featherlite line! You'll find models to meet your every requirement.

- Lightweight—easy to carry and handle—save you time and money.
- Constructed of strong, durable aluminum—reduce your replacement costs.
- Built to last for a lifetime!

WRITE TODAY FOR ILLUSTRATED BROCHURE

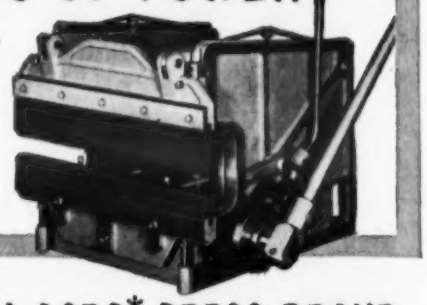
Model XT Extension ladders from 16 to 40 feet.

WHITMAN FEATHERLITE METAL PRODUCTS
8771 Grand River Avenue • Detroit 4, Michigan

▲ For more details circle NED-50 K4 on enclosed inquiry slip ▲

8 TONS OF POWER

For BENDING
CURLING
BOX FORMING
CORRUGATING
PUNCHING
BLANKING
HEMMING
FLATTENING



NEW DI-ACRO* PRESS BRAKE

Eliminate tie-up of a large press brake on short-run production jobs with the new Di-Acro Press Brake. It's quickly set up for experimental engineering, too. Hand operated—ample power is provided for average use by a simple cam lever mechanism, plus a power multiplying ratchet drive for heavy forming jobs.

New Di-Acro Press Brake forms 16 gauge mild sheet steel across the full 24" forming width, 10 gauge mild sheet steel across a 12" width as well as inconel, brass, aluminum, stainless steel, chrome molybdenum and other ductile materials. Available with standard dies and specials —both are interchangeable with other press brakes.

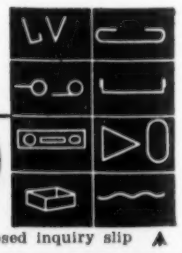
See Di-Acro Exhibit
BOOTH 1215
National Metal Show
Chicago—Nov. 1-5

Send for Catalog

*Pronounced Die-ack-ro

O'NEIL-IRWIN MFG. CO.
354 8th Ave., Lake City, Minn.

di-acro PRECISION METALWORKING MACHINES



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CUSTOM MADE PRECISION STAMPINGS IN SMALL LOTS

Since 1921 we have specialized in the production of accurate die-cut metal stampings in small lots. The tool cost is low . . . actually as low as 15% to 20% of the cost of permanent tools. We guarantee dependable service and delivery on date specified.

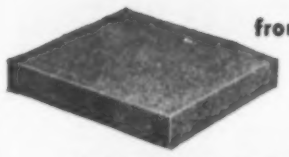
• **SEND** us a sample or blueprint. We'll quote you a price. Or write for detailed information.

DAYTON ROGERS *Manufacturing Company*
Minneapolis 7E, Minnesota

▲ For more details circle NED-52 K4 on enclosed inquiry slip ▲

Armstrong's

VIBRACORK CUSHIONS VIBRATION



from Hydraulic Presses, Pumps, Compressors, and many other types of Machinery and Equipment

. . . ACTUALLY FLOATS THE LOAD ON MILLIONS OF AIR CELLS!

Vibracork is a resilient machinery isolation cork plate made of pure cork granules, compressed and baked under pressure.

Convenient to stock — Standard sheets, 12" x 36"; Standard density, 2" and 3" thick; Heavy density, 1", 2" and 3" thick.

Easy to use — Can be cut to size on the job with an ordinary hand saw.

Loading range — Standard density, 1500# to 4000# per. sq. ft.; Heavy density, 5700# to 8500# per. sq. ft.

Availability — Immediate delivery. Korfund is sole distributor for the United States.

For installation data and further information, ask for Bulletin VC-500.

THE KORFUND CO., INC.

KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK

48-35P Thirty Second Place • Long Island City 1, N. Y.

For more details circle NED-53 K4 on enclosed inquiry slip

New, Revolutionary METALLIZING GUN

MOGUL Turbo-Jet

Be sure to visit our Booth No. 1456 at the National Metal Exposition, International Amphitheater, Chicago, November 1 through November 5.

General purpose gun to take care of all your spraying applications.

The Result of over 30 Years of Experience

The Mogul Turbo-Jet will spray and deposit an extremely dense coating using wires from 20 ga. to 3/16" dia. from the highest melting point molybdenum to the softest metals. No changing of worm gears or feed rolls.

New Mogul Turbo-Jet is magnetic-controlled, with a spray range from 2½ inches per minute to 20 feet per minute.

Dual feed rolls individually driven, eliminate slippage and give more positive feed.

Will operate on acetylene, propane or natural gas 15 lbs. P.S.I.—low gas and oxygen consumption.

SPRAYS ALL METALS FASTER, WITH GREATER EFFICIENCY

The New Mogul Turbo-Jet is the most perfectly balanced gun ever developed and is the result of over 30 years of leadership in the metallizing field.

It is built for years of trouble-free, high performance service with a minimum of maintenance.

The New Mogul Turbo-Jet will spray all metals faster and with greater efficiency than any other spray unit ever built.

Prove Mogul Turbo-Jet's superiority right in your own shop. Free Trial test to metallizing users.

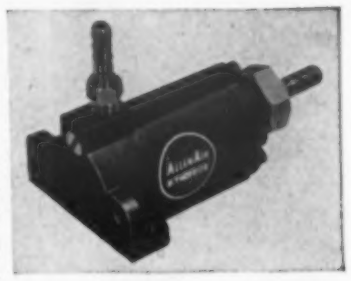
MOGUL

Write for further information today on the New Mogul Turbo-Jet. Ask about free trial test offer to Metallizing users.

METALLIZING COMPANY
of America
Dept. NED
3500 West Carroll Avenue, Chicago 24, Illinois

For more details circle NED-54 K4 on enclosed inquiry slip

AIR-OPERATED CLAMP can be mounted in any position



Having one-to-one ratio of force to air pressure, model AC-1 x 1 spring return air clamp has 1-sq in. piston area and 1-in. stroke. Cast bosses permit mounting in horizontal or vertical position, and threaded nose piece adapts it for in-wall or panel mounting. Two ⅛-in. tapped holes at 90-degrees to each other give optional air inlet. One hole is plugged and brass barbed connector for ¼-in. hose is fitted in other hole. Made by **A. K. Allen Co.**, 57 Meserole Ave., Brooklyn 22, N. Y.

For more details circle NED-55 K4 on enclosed inquiry slip

TEST CHAMBER table model produces temperatures in range of —100° to 212° F

Self-contained, this table model test chamber will maintain temperatures as low as −100° F and will produce temperatures up to 212° F. Capacity is adequate to dissipate 1000 Btu per hr at −80° F. Cascade system of refrigeration, utilizing Freon 22 in first stage and Freon 13 in second stage, provides for compact design and ease of maintenance. Refrigeration tubing encircles the 1-cu ft test chamber to assure uniform temperatures throughout this work space.

Heating is accomplished by nonglowing, low surface temperature electric heaters located in rear of chamber. Air is circulated throughout stainless steel chamber by fan, and a 2½-in. porthole admits electric leads into chamber for operating equipment under test and for connecting to outside indicating, recording or control instruments. Automatic controls maintain preselected temperatures within 2° F of settings. Actual temperatures are checked by means of a thermobulb type dial thermometer. Made by **Tenney Engineering, Inc.**, Dept. E, 1090 Springfield Rd., Union, N. J.

For more details circle NED-56 K4 on enclosed inquiry slip

Benches & Tool Stands

Auto-Sheet Metal Works—8-page illustrated catalog C-22-33 includes descriptions of stationary and portable tool stands, service carts, bench drawers, and pressed steel bench legs in addition to steel work benches. Equipment is available with a choice of color in enamel finish, and benches are provided with various working surfaces.

For more details circle NED-57 K4 on enclosed inquiry slip

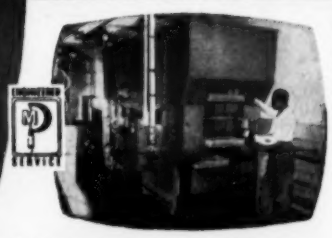
ELECTRONICS MANUFACTURER

REPORTS OVER 30% SAVINGS IN DEGREASING SOLVENT

PHILLIPS

Raytheon Mfg. Co. reports over 30% savings in degreasing solvent since the installation of its new Phillips cross-rod conveyorized degreaser. In degreasing operations for its highly reliable quality line of receiving tubes, Raytheon also reports these added advantages: Automatic adjustable timing cycle for uniform degreasing; savings in operator time; minimum fume exposure; and consistently cleaner parts. Just another story of Phillips efficiency degreasers. Check with us today for the answer to your cleaning problems. We'll be glad to help you with your "problem" parts. Send us a sample for test with the new PHILLIPS "Ultra Clean" process.

VAPOR DEGREASERS



The Phillips cross-rod conveyorized degreaser installed at Raytheon's receiving tube division.

Look for us at the National Metal Exposition—Chicago Nov. 1-6, Booth 1319

Send for your copy of the Phillips Catalog showing a complete line of units—one for every job.

PHILLIPS MANUFACTURING COMPANY
ENGINEERED METAL CLEANING EQUIPMENT
3463 TOUHY AVENUE • CHICAGO 45, ILL.

In Canada Phillips equipment is manufactured under license by Williams Tool Corp. of Canada, Ltd., Brantford, Ont.

For more details circle NED-58 K4 on enclosed inquiry slip

WEBB TOWVEYOR*

for FASTER, SAFER & EASIER MATERIALS HANDLING

FASTER travel from loading to unloading stations—trucks are delivered to proper destination without wasted traveling time.

EASIER handling—trucks engage Towveyor chain by lowering tow pin and are disengaged at any point by raising of tow pin.

SAFER floors—Towveyor eliminates overhead chains and supports and employees can safely walk or truck over any portion of the system.

Cut your costs with a Towveyor system that will efficiently speed up your materials handling.

*Towveyor is a registered trademark identifying floor truck conveyors patented, manufactured and installed by the Jervis B. Webb Company.

JERVIS B. WEBB CO.
Conveyor Engineers and Manufacturers
8921 ALPINE AVE. • DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES

For more details circle NED-59 K4 on enclosed inquiry slip

P&S PULL LAMPHOLDERS

One-piece design — no shadeholder to become loose. Built-in mechanism — can be wired without removing interior.

P&S PULL LAMPHOLDERS WITH CONVENIENCE OUTLETS

Same basic design as P&S 4046-2, *plus* outlet connected internally — no extra wires, soldering or taping.

Fine P&S porcelain—precision-built mechanism — will stand up under years of hard usage.

your choice make it . . .

P&S

Dept. N
PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK
Offices: 71 Murray St., New York 7, N. Y.
1229 W. Washington Blvd., Chicago 7, Ill.

For information on complete P&S Line, send for Catalog No. 49. Specify P&S by catalog number.

For more details circle NED-60 K4 on enclosed inquiry slip

FREE . .

*chem-valve FOLDER DESCRIBES NEW TRUCK TANK VALVE

This new illustrated color folder has full information on the "Quick Discharge" Chem-Valve. Tells how you can save many hours by speeding up unloading of bulk liquids. Full specifications, prices, parts list, delivery date are also available.

This New Stainless Steel Chem-Valve is ruggedly constructed to give you "trouble-free" service for the life of the tank. You get four big arch entrances and a 3⅜" diameter opening that can't be clogged, even with congealing liquids. Mounted inside the tank. Safe from damage. Complete valve accessories furnished for quick installation in any size tank. Easy to operate with handwheel on top of tank. Universal joints prevent binding caused by tank distortion.

TRADE MARK of *chem-valve corporation • Kenvil, New Jersey

Chem-Valve Corporation
99 Berkshire Valley Rd., Kenvil, New Jersey

MAIL THIS COUPON TODAY

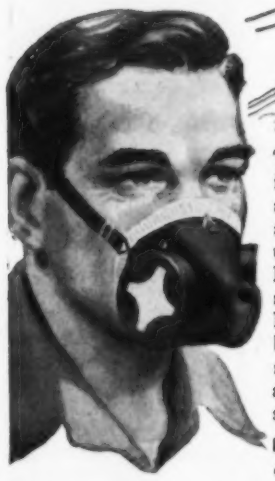
Yes, Send Along Your New Color Folder..... Sounds Interesting
Name..... Title.....
Company.....
Address.....
City..... State.....

chem-valve corporation — 99 Berkshire Valley Rd., Kenvil, New Jersey

For more details circle NED-61 K4 on enclosed inquiry slip

Got DUST STORM THROAT?

YOU NEED A...
DUPOR No. 4



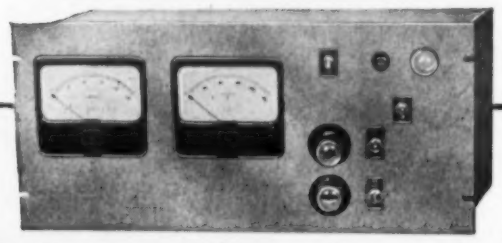
The respirator that's made to order for protection against dust, fumes and paint spray! Has everything, and more than you will find in units costing twice the price! Double filters; soft rubber face mask; sanitary face cloth; exclusive Dupor valves for controlled breathing; panorama vision! Economical protection that you cannot afford to be without! Write for sample, $2.00 postpaid!

H. S. COVER, SOUTH BEND, IND.

"Respirators for Industry since 1894"

▲ For more details circle NED-67 K4 on enclosed inquiry slip ▲

Power Equipment Company's NEW VOLTAGE REGULATING CIRCUIT



Offers These Design Advantages In Power Supplies!

- ★ Greater provision for heavier power requirements.
- ★ Need for fans, blowers or other moving parts eliminated.
- ★ A VR-105 single voltage regulating tube is only tube used. This has an alternate VR-105 which is used as a ready standby to assure continuous power flow.
- ★ Filtered to hold ripple voltage in D-C output to less than 0.5% RMS at full load.
- ★ Not dependent upon accurate maintenance of line frequency. Successfully used with emergency, portable or standby units.
- ★ New supplies listed in standard sizes.

These new Peco power supplies are designed to do a better job simply, inexpensively and with less maintenance. Write for free bulletin listing specifications and standard sizes.

POWER EQUIPMENT COMPANY
5740 Nevada, East • Detroit 34, Michigan

▲ For more details circle NED-68 K4 on enclosed inquiry slip ▲

with PLASTIC ROCK!

Trowel a smooth, tough, malleable surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-safe wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries and railroads.

ASK FOR REPORT 220-N-10.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

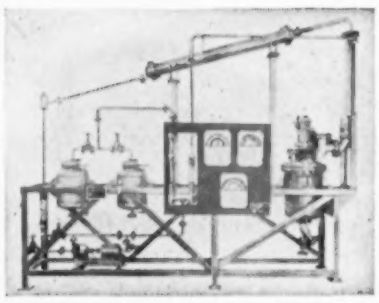
▲ For more details circle NED-69 K4 on enclosed inquiry slip ▲

PORTABLE INCINERATOR
three sizes burn 200-450 lb/hour

Three standard sizes of this portable incinerator afford capacities for burning from 200 to 450 lb of average dry waste per hour. Modifications of the basic design are available for disposal of pathological waste, garbage and other wet refuse. Large split-guillotine type, counterbalanced door facilitates charging bulky objects such as boxes and cartons. Long gas travel provided by the design, with numerous velocity and direction changes affords high combustion efficiency. Separate settling chamber, permanent steel skids and top stack outlet are featured as well. Incinerator has steel casing and company's own monolithic refractory lining. Made by **Plibrico Co.**, 1800 N. Kingsbury St., Chicago 14, Ill.

▲ For more details circle NED-70 K4 on enclosed inquiry slip ▲

PILOT PROCESS PLANT
is applicable to study of many different processes



Shipped preassembled or in match-marked parts for simple installation, this semipilot plant assembly will facilitate obtaining basic design data, determining the effects of variables and evaluating the practical economics of processes. It occupies less than 55 sq ft of floor space and is 12 ft high. Extremely flexible, equipment is easy to operate and offers exacting control.

The assembly consists of several components. A 25-gal jacketed reaction vessel is equipped with an agitator featuring interchangeable impellers, variable speed drive. Vessel has flush-bottom valve. Jacketed column can be packed or left empty. Two receivers have 15-gal capacities each. Additional equipment includes shell-and-tube condenser, condensate pump and a control panel where reflux and product take-off rates are controlled and measured. Temperature and pressure controllers and recorders can be installed on panel as required by process. Made by **Industrial Process Engineers**, 6-8 Lister Ave., Newark 5, N. J.

▲ For more details circle NED-71 K4 on enclosed inquiry slip ▲

BUSCHMAN

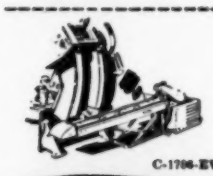
PORTABLE PRESS-TENDER

- PRESS TO PRESS
- PRESS TO TOTE BOX
- PRESS TO CONVEYOR

Featuring fast one-man positioning and adjustment, the BUSCHMAN powered belt Press-Tender eliminates costly manual handling . . . adds profits to press room operation.

Operating angles of the Press-Tender are variable from 13° to 48° and working heights are adjustable both front and rear. Adequate capacity for any press is assured by belt speed of 72 feet per minute.

Durable in construction and stable in design, the BUSCHMAN Press-Tender is available in models and sizes for use with any size or type of press.



C-1706-EWB

For complete specifications, send today for Bulletin B150.

PRODUCE MORE ... FOR LESS on Buschman Conveyors

THE E. W. BUSCHMAN CO.
4482 Clifton Ave. • Cincinnati 32, Ohio

▲ For more details circle NED-72 K4 on enclosed inquiry slip ▲

to insure performance at its best— specify... SEALMASTER BALL BEARING UNITS

Important factors in the performance of any product or manufacturing process involving motion are the bearing units carrying the load. The name SEALMASTER stamped on the bearing units of every machine you buy, use or build is your assurance of performance and long life. There is a SEALMASTER Bearing Unit to meet your every requirement.

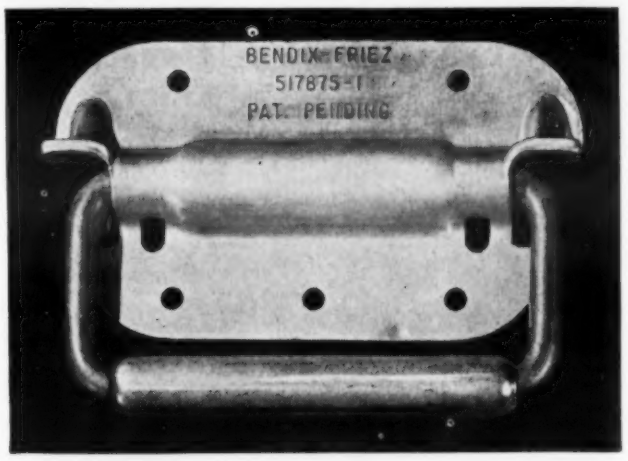
SEALMASTER Bearing Units are available in a wide selection of standard housings. Special housings also made to order.

SEALMASTER Dealers are located in ALL principal cities. Write for Bulletin #454.

SEALMASTER

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

▲ For more details circle NED-73 K4 on enclosed inquiry slip ▲



WONDERFUL NEW HANDLE

. . . if you sell or ship anything that has to be lifted, this is for you. It meets military requirements for many specialized equipment uses. Count its advantages in the specs below.

This patented Bendix-Friez handle is rust-proof . . rattle-proof and withstands shock and vibration.

It has a positive "snap-back" principle.

Built of stainless steel and aluminum, it can be riveted or welded to any kind of container or depressed in the sides.

What's a large instrument manufacturer doing making handles? We couldn't seem to find one for our own use that pleased us . . . so we made one ourselves.

Manufacturers who saw it and needed a better handle liked it. If you've got something that's got to be lifted by handles . . . chances are this Bendix-Friez handle is for you. Small or large quantity orders. Inquiries answered promptly.

BENDIX FRIEZ

FRIEZ INSTRUMENT
Division of
Bendix Aviation Corporation
1444 Taylor Ave., Balto. 4, Md.

EXPORT SALES
Bendix International Division
205 E.42nd St., New York 17, N.Y.U.S.A.

▲ For more details circle NED-74 K4 on enclosed inquiry slip ▲

S-A Automatic

TELLEVEL BIN LEVEL CONTROL

Avoids SPILLAGE Saves TIME AND STORAGE SPACE

PRICED AS LOW AS $40.00

FOB Aurora, Illinois Plus low cost installation. State or local sales tax extra

● Fill bins, tanks or hoppers to capacity with S-A Tellevel without danger of wasteful overflow. Tellevels near top or bottom or at several levels give completely automatic, fool-proof level control — start or stop conveyors, etc., or sound alarm. Normal, heavy duty and explosion-proof models.

MAIL COUPON FOR DATA

STEPHENS-ADAMSON MFG. CO. (SA)
Standard Products Division
12 Ridgeway Ave., Aurora, Ill.
Please send me Bulletin 11-0 on Tellevel Controls.
Name .....
Company .....
Address .....
City ..... Zone ..... State .....

For more details circle NED-75 K4 on enclosed inquiry slip

If you have a labeling problem ordinary labels can't solve...use AVERY Kum-Kleen self-adhesive LABELS

...the tough ones are our specialty

...where other types of labels are found "wanting"...or when you need to substitute an attractive pressure-sensitive label for a costly nameplate... Avery Kum-Kleen labels are the *best* solution to your problem!

...and so are the other kind..

...where you want *faster* labeling... improved appearance...labels that won't pop, curl or peel...or those the housewife can remove without soaking or scraping...there's no substitute for an Avery Kum-Kleen label!

faster • easier • more economical

Patented Avery dispensers...manual or electric... feed die-cut *pressure-sensitive* labels off roller tape, ready to be LAID ON any clean, smooth surface. No moistening...no sticky fingers. Where can YOU use these labels in YOUR business? Write today for free samples, case histories and prices.

AVERY ADHESIVE LABEL CORP., DIV. 102
117 Liberty Street, New York 6 • 608 South Dearborn Street, Chicago 5
1616 So. California Ave., Monrovia, Cal. • Offices in Other Principal Cities
Originators of Pressure-Sensitive Labels

For more details circle NED-76 K4 on enclosed inquiry slip

NOW YOU CAN HAVE METERED SURETY IN HANDLING CORROSIVE LIQUIDS

All Stainless Steel Meter

Rotocycle meter, cut away to show the all-revolving rotor construction.

CONTROLS FORMULAS, COSTS, INVENTORIES

Rockwell Model 2-BC stainless steel meters provide indisputable records for the quantities of corrosive liquids used in mixing formulas. They provide basic accounting facts for accurate cost identification; for inventory controls; for tax analysis purposes.

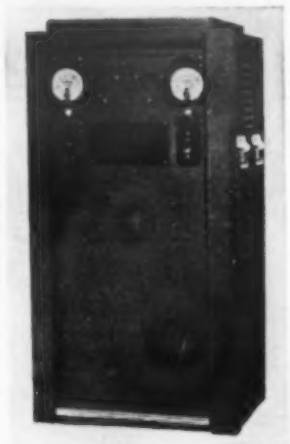
These meters are constructed *inside and out* of stainless steel. Rated capacity 100 gpm. Quantity control registers and electrically actuated remote registration systems are available. Described in bulletin OG-403. Write *Rockwell Manufacturing Co., Dept. D-5 Pittsburgh 8, Pa.*

YOU CAN RELY ON ROCKWELL

ROCKWELL INDUSTRIAL METERS

For more details circle NED-77 K4 on enclosed inquiry slip

ULTRASONIC POWER GENERATOR drives 70 to 100-sq in. transducer to speed parts cleaning, degreasing



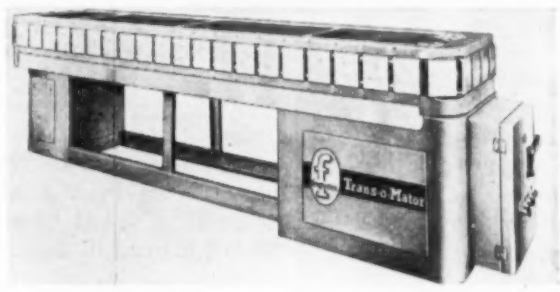
Cleaning and degreasing of metal, rubber, plastic, glass and ceramic parts is speeded up by this Sonogen 2000 ultrasonic power generator which drives a barium titanate transducer immersed in tank of cleaning solvent. Unit's 2000-w output is fed into transducer at 100,000 cycles per second. Transducer converts the radio frequency into mechanical vibrations which violently and quickly agitate dirt and grease loose from parts. Knurled parts can be cleaned in 2 seconds.

A single generator can drive transducer with area of 70 to 100 sq in. or several smaller transducers with the same total area. Equipment can also be used safely and remotely to decontaminate radioactive parts and equipment, or can function as an ultrasonic power source for emulsification, dispersion and acceleration of chemical reactions. Unit measures 42 x 23 x 18½ in. Made by **Branson Ultrasonic Co.**, Dept. NED, 430 Fairfield Ave., Stamford, Conn.

For more details circle NED-78 K4 on enclosed inquiry slip

TRANSFER MACHINE for use with any desired tooling

Standardized Trans-O-Mator multiple station transfer machine is suitable for a wide variety of applications in industries converting to automation. Desired



tooling can be easily attached for light machining, forming, pressing, assembling and inspection operations. Unit comprises motor, reducer, clutch, roller gear drive for high speed precision indexing, chain and carriers. There is an electrical interlock system between indexing and tooling power supplies as well as start, stop and jog controls and provision for an automatic scanning device. Type A unit is designed for operating versatility at production rates up to 6000 pieces per hour. Type B, operating at speeds up to 20,000 pieces per hour, is a high production unit. Made by **Ferguson Machine & Tool Co.**, Roller Gear Div., Dept. 101, P. O. Box 191, St. Louis 21, Mo.

For more details circle NED-79 K4 on enclosed inquiry slip

UNUSUAL BARGAINS

SAVE TIME AND MONEY ON INSPECTIONS!

A $225.00 Value Only $95 Postpaid

STEREO MICROSCOPE With Changeable Objectives

Wide, 3-Dimensional Field — Excellent Working Depth

Fine, imported Binocular Microscope at a substantial saving. Used for inspections, examinations, counting, checking, etc. Erect image for easy interpretation. You get 2 pairs of eyepieces, 2 pairs of objectives (slide in and out on machined surfaces). Power range from 13X to 75X. Variable inter-ocular distance. Will accommodate standard eyepiece reticles. Rack and pinion variable tension focusing. Hardwood carrying case included. Accessories available. Recommended for lab, shop, factory or home use. We guarantee complete satisfaction or your money back.

Order Stock No. 70,036-AE, $95 ppd
Send Check or Money Order or order on open account.

VARIABLE POWER—20X—40X—60X

POCKET MICROSCOPE

A very handy "pocket" instrument with extra wide range of power for quick, easy spot-checking and inspection. It's light, sturdy. Milled ring spiral focusing. Grey enamel finish. Length 5⅜".
Stock No. 30,005-AE ..... $3.95 Postpaid
(Send check or M.O., or order on open acct.)

INFRA-RED FILTERS

5⅜" Dia. Use in front of your light source to screen out visible light —to yield only invisible infra red rays.
Stock # 60,033-AE ..... $2.00 pstpd.
(14,000 Units available at liberal discount to quantity users.)

GET FREE CATALOG "AE"

If you haven't seen our big, FREE Catalog, you don't know what you're missing. Fantastic variety—never before have so many lenses, prisms, optical instruments, and components been offered from one source. Positively the greatest assembly of bargains in all America. Imported! War surplus! Telescopes! Microscopes! Hand Spectroscopes, Prisms, Lenses, Reticles, Mirrors and dozens of other hard-to-get optical items. Write for FREE CATALOG "AE".

EDMUND SCIENTIFIC CORP., Barrington, N. J.

For more details circle NED-80 K4 on enclosed inquiry slip

How to Protect Your Goods
. . . in shipment . . . in storage

Get this FREE 24-page Shipping Guide

Here are the facts on how a super-strong, waterproof paper may be your answer to safe, lower cost shipping and storage. Read how rugged Fibreen, in rolls or blankets, gives new, low-cost protection from rough handling, water, moisture, dust, grit and staining. See how it provides protection for machinery, tools, steel, aluminum, rope, textiles, furniture, abrasives, leather, rubber and many other products. Send for Fibreen Shipping Guide today.

NED-10

AMERICAN SISALKRAFT CORPORATION
Attleboro, Mass. • Chicago 6, Ill.
New York 17, N. Y. • San Francisco 5, Calif.

For more details circle NED-81 K4 on enclosed inquiry slip

CM

HERC-ALLOY

THE ORIGINAL ALLOY CHAIN

● An all-purpose chain for use where safety is paramount.
● Offers highest resistance to impact loading.
● Individually tested to twice working-load limit and registered.

Sold in running lengths, slings and other special assemblies.

CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK

For more details circle NED-82 K4 on enclosed inquiry slip

STOP! INJURIES AND WORK INTERRUPTIONS from falling fluorescent-tube accidents

Fluorescent tubes sometimes fracture. Vibration and shock may release them from fixtures. Wherever fluorescent lighting is installed there is the possibility of physical injury and property damage resulting from falling tubes.

Don't wait for accidents to happen. For a few cents each you can keep tubes in place, prevent falling, insure against poisoning, contamination and spoilage, avoid injuries, work interruptions and loss of time.

Install Den-El fluorescent lamp guards, easily and quickly, with a screw driver. Permanent, positive protection. Stainless steel. Easily sprung aside for relamping or cleaning. Two guards for each lamp.

Types for all fixtures, also tubes in series
For 40W tubes, per C $17.00
For 100W tubes, per C $20.50

ORDER TODAY DIRECT

Ask for bulletin, also complete General Scientific catalog of hundreds of other safety equipment items

All orders shipped promptly from Philadelphia

GENERAL SCIENTIFIC EQUIPMENT CO.
2701 W. HUNTINGTON ST., PHILADELPHIA 32, PA.

SAFETY EQUIPMENT FOR EVERY HAZARD

For more details circle NED-83 K4 on enclosed inquiry slip

convert AC to DC power!

Closely Regulated Voltage...
with the NEW
MAGNETIC AMPLIFIER • SELENIUM RECTIFIER

VICKERS
regulated DC POWER SUPPLIES
in Complete, Self-contained Units

- 5 KW to 50 KW MODELS
- REGULATED ±1%
- TUBELESS
- HIGH AMBIENT TEMPERATURE OPERATION From sub-zero to 122°F (50°C)

AC INPUT
230 volts, 3 phase, 60 cycle
460 volts, 3 phase, 60 cycle

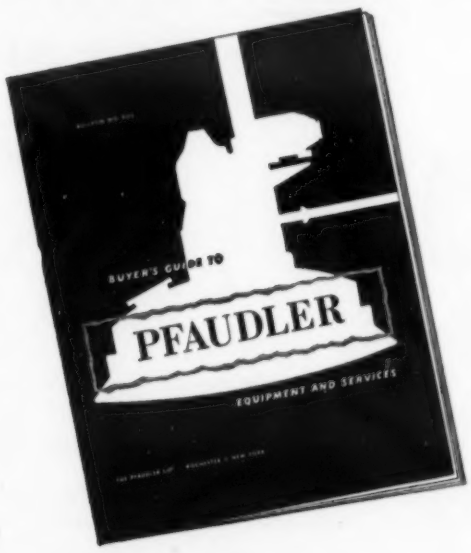
DC OUTPUT
Voltage: 125 volts or 250 volts (either voltage obtainable by simple internal reconnection)
Control potentiometer for adjusting DC voltage

Write TODAY for Bulletin

VICKERS ELECTRIC DIVISION
VICKERS Inc.
a unit of the Sperry Corporation
1813 LOCUST ST. • ST. LOUIS 3, MO.

For more details circle NED-84 K4 on enclosed inquiry slip

12-PAGE BUYER'S GUIDE



shows complete line of processing equipment and services

Contains pictures and data, valuable information on how you can get special help in selecting materials and designs for processing equipment.

Saves you time, when new equipment is needed quickly for a new or revised process.

PARTIAL LIST OF CONTENTS

How to get process engineering help
Reactors—glassed steel and stainless steel
Custom-built alloy equipment
Characteristics of glassed steel
Heat exchangers and columns
Glassed steel pipe, fittings, valves, etc.
Evaporation equipment
Facilities available at Pfaudler factories

If you don't already have a copy of the "Buyer's Guide to Pfaudler Equipment and Services," mail the coupon and we'll send you one immediately.

Pfaudler

THE PFAUDLER CO., Dept. NED-10, Rochester 3, N. Y.
Please rush me a copy of the Buyer's Guide to Pfaudler Equipment and Services.
Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State____

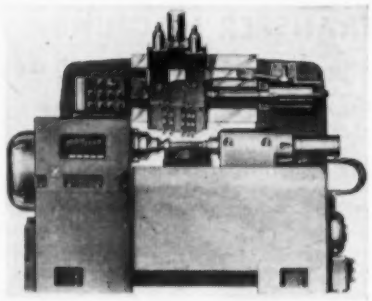
For more details circle NED-85 K4 on enclosed inquiry slip

INFRARED OVEN SECTIONS
use lava-coated ceramic generators

Lava-coated ceramic-type electric infrared generators are employed in driQuik interlocking oven sections for all industrial baking, drying, dehydrating, preheating, degreasing and curing. Generators withstand shock, vibration and moisture. They are set in solid aluminum reflectors and are dark burning, minimizing high light hazard. Sections are completely wired, and hinges and adjustment brackets allow their assembly into contoured as well as flat ovens. Variable temperature control from 0 to 100 per cent of rated power is possible. Sections with four or two generators each are offered. Generators are rated 500, 650 or 750 w. Made by **Dry Clime Lamp Corp.**, Industrial Div., Dept. NED, Greensburg, Ind.

For more details circle NED-86 K4 on enclosed inquiry slip

AUTOMATIC LATHES
high metal removal rate and reverse rotation adapt units for automation



Metal removal rates up to 52 lb per minute, automatic chip removal and rotation reversed from normal practice are characteristics which suit line of automatic lathes to automation practices. Lathes perform boring, facing and turning of straight, tapered or contoured work. Reversed rotation with rear-mounted tooling affords unobstructed loading area and assures smooth cutting at high speed because pressures on tools are downward instead of upward.

Chip flow is unobstructed through full width chute. On model HD-8, a 30-hp, 1800-rpm motor is recommended for spindle and main drive, while model HD-16 calls for 100-hp motor. Proportionate motor sizes are provided for on models HD-12 and HD-24. Spindle speeds are infinitely variable from 82 to 2400 rpm on the 8-in., from 98 to 1475 rpm on the 12-in. and from 66 to 1072 rpm on the 16 and 24-in. models.

Automatic multiple cycling is provided, and either cam control of carriages and slides, or tracer operation is available. Lathes conform to both hydraulic and electrical JIC standards. Made by **Hydra-Feed Machine Tool Corp.**, 730 W. Eight Mile Rd., Ferndale, Mich.

For more details circle NED-87 K4 on enclosed inquiry slip

For top quality lightweight castings turn to WELLMAN. You'll be sure of getting:

- An experienced manufacturer
- A product made under close laboratory control
- Competent designers to work with your engineers
- A wide range of specifications and alloys
- Production economy

Catalog No. 53 on request

Well-Cast MAGNESIUM, ALUMINUM AND BRONZE CASTINGS
Well-Made WOOD AND METAL PATTERNS

THE WELLMAN BRONZE & ALUMINUM CO.
Dept. 9, 12800 Shaker Boulevard Cleveland 20, Ohio

For more details circle NED-88 K4 on enclosed inquiry slip

PIC STEEL UNIONS

Pics *look* good on new equipment because their brightness blends perfectly. Pics *operate* well because a special wedge type bronze seat gives a tight, safe closure. They're strong also — ends are heavy steel pipe coupling stock, uniformly flat-sided for speedy installation with open end wrenches. 100% zinc plating protects against rust. Pics sell for *less* than a galvanized, *no more* than a black malleable union.

For 150# Service — Write for FREE Samples
DART UNION COMPANY
132 Thurbers Avenue, Providence 5, R. I.

For more details circle NED-89 K4 on enclosed inquiry slip

THE *New* HILLIARD TWIFLEX
AUTOMATIC CENTRIFUGAL CLUTCH COUPLING *with* *Flexible* ACTION...

NEW Important Features

1. Flexible in all directions.
2. Absorbs shock.
3. Limits torsional vibration.
4. Has adjustable idle speed.
5. Smooth starting.
6. Available in automatic free-wheeling type.
7. No slip under normal load at full speed.
8. Available in automatic backstop type.
9. Protects driver and driven mechanisms against overload shock.
10. Prevents torsional resonance.

If you have problems of misalignment - smooth starting - vibration - overload - or assembly in the manufacture or operation of:

- COMPRESSORS
- BLOWERS
- DIESEL ENGINES
- EXCAVATORS
- GASOLINE ENGINES
- TEXTILE MACHINERY
- WIRE DRAWING
- BALL MILLS
- ELECTRIC MOTORS
- GENERATORS

Let our engineers consider your problems. TWIFLEX may be the answer.

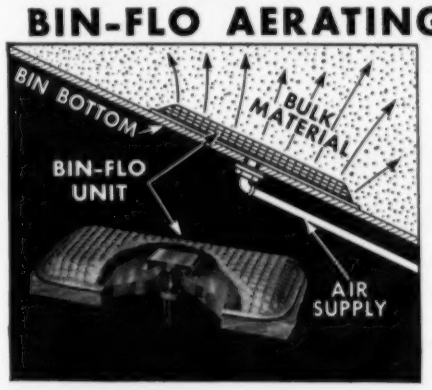
• The HILLIARD line of clutches •

Over-Running	Single Revolution	Slip
Dual Drive Two Speed Drive Ratchet Feed Backstop	Controlled intermittent motion; accurate, positive, no-slip, automatic.	Overload protection Constant tension Winding and reeling
Write for Bul. 231	Write for Bul. 239	Write for Bul. 300

THE HILLIARD Corporation • 100 W. 4th St., Elmira, N. Y.

For more details circle NED-90 K4 on enclosed inquiry slip

BIN-FLO AERATING UNIT

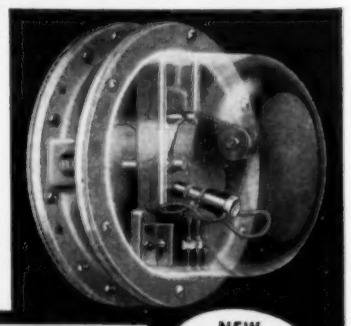


Provides Steady Flow of Dry, Finely Ground Materials which tend to bridge in storage. Uses only small amount low-pressure air.

BIN-DICATOR BIN LEVEL INDICATOR

For All Bulk Materials

signals change in level; automatically starts and stops filling and emptying equipment.



THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

NEW DETAIL DATA BOOK FREE

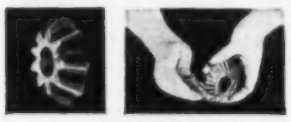
For more details circle NED-91 K4 on enclosed inquiry slip

Better Packaging at LOWER COST

NEW SMALL AGITATED TANK
For Production Processing Plastic Seal

Controlled temperature • Constant level in dipping area • 14-lb. capacity • Other standard tank sizes range from 6 to 225 lbs. of plastic per load.

PLASTIC SEAL PROTECTS PARTS
from Rust and Damage in Shipping



Forms a skin-tight coating that is moisture-proof and air-tight. Strongly resists shock and abrasion. Easily peeled. Transparent or in colors for coding.

WRITE FOR FREE ENGINEERING SERVICE ON PRODUCTION DIPPING PROBLEMS

GLOBE IMPERIAL CORPORATION

2023 KISHWAUKEE STREET • ROCKFORD, ILLINOIS

For more details circle NED-92 K4 on enclosed inquiry slip

NEW CUTLER-HAMMER 9101
TWO-POLE MOTOR SWITCH

Better Control and Protection for All Motors up to 1 HP

Check these features and know the difference: Twin-break solid silver contacts; quick make and quick break. All mechanical operating parts are stainless steel. Famous Cutler-Hammer Eutectic Type thermal overload protection. Free-tripping; contacts cannot be held closed. Resets when switch is thrown to off position. Motor load sensing coils are fully enclosed but front removable; available for 10% loading increments.

Easiest to install and wire; removing wrap-around cover exposes mechanism completely, at front and both sides. Cover secured by single self-retained screw which cannot drop out and become lost. No annoying loose insulating baffle. Straight-through wiring; line terminals at top and load terminals at bottom . . . all clearly marked. Switch mechanism so compact it can be used in ordinary wall switch outlet box with standard toggle switch plate. Ideal for flush mounting on wall, panel or in machine cavity. Your Authorized Cutler-Hammer Distributor stocks both single pole and two-pole models of the new C-H 9101 Motor Switch. Order today and see the difference. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto.

EASY TO WIRE
Removing wrap-around cover opens switch at front and both sides.

OPEN TYPE 9101
Ideal for flush mounting on wall, on any panel or in a machine cavity.

CUTLER-HAMMER

CUTLER-HAMMER MOTOR CONTROL C-H

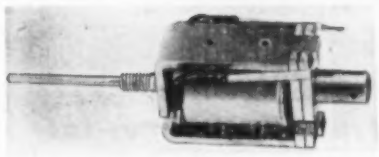
For more details circle NED-93 K4 on enclosed inquiry slip

PROTECTIVE GLOVES
neoprene, for general industrial use

Made from Dupont neoprene, Neo-Sol industrial protective gloves are available in five sizes, four weights and in lengths from 10½ to 18 in. Gloves are black with red inner lining and red roll at the cuff. Fingers are curved for comfort, and gripping surfaces can be either rough or smooth. Gloves provide protection against a wide variety of corrosive and caustic materials. Made by **Charleston Rubber Co.**, 154 Stark Industrial Pk., Charleston, S. C.

For more details circle NED-94 K4 on enclosed inquiry slip

DIRECT CURRENT SOLENOIDS
are miniature, lightweight, compact



Series 100 and 300 direct current solenoids are available with wide variety of mountings, coils and wire sizes, so that up to 300 different types can be made from 20 standard parts. Changeover from pull to push type is simply made by adding a threaded 3/32-in. push rod to plunger. Standard or class H insulations are available. Made by **Joseph Pollak Corp.**, 85 Freeport St., Boston 22, Mass.

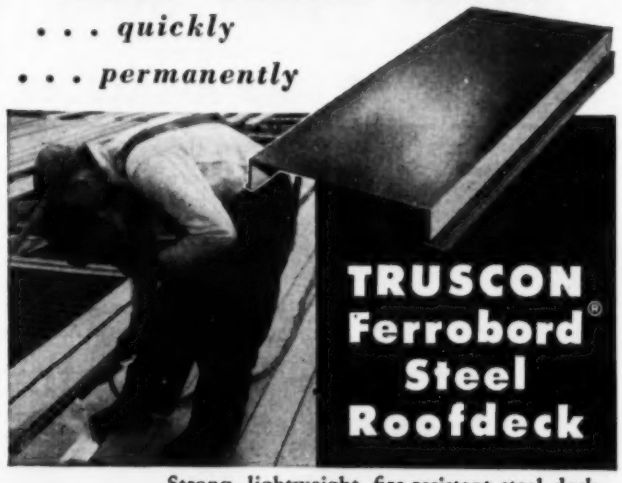
For more details circle NED-95 K4 on enclosed inquiry slip

HOOK SCALES
capacities range to 20,000 lb

Accuracy within ¼-per cent of capacity at any point on dial is built into Su-20 Sensater hydraulically operated hook scale. Mobile diaphragm does not deflect but moves with its backing plate. Friction is eliminated, and accuracy is unaffected by temperature and fluid changes. Scale is available in 5000, 10,000 and 20,000-lb capacities. Other features include ultimate strength of five times rated capacity, 360-degree calibration and pointer travel overload margin of 90 degrees beyond dial capacity. Hook can be swiveled in any direction and gage can be tilted up or down to any eye level. Unit has 25 per cent tare adjustment. Made by **Martin-Decker Corp.**, 3431 Cherry Ave., Long Beach 7, Calif.

For more details circle NED-96 K4 on enclosed inquiry slip

ROOF LARGE AREAS
. . . quickly
. . . permanently



Strong, lightweight, fire-resistant steel deck for flat, pitched, or curved roofs. In units long enough to span three or more purlin spacings. Each member firmly interlocks along its full length with adjoining unit for maximum strength. Erected from above, no scaffolding needed. Ideal surface for application of insulation and built-up waterproofing. 18-gage and 20-gage copper-bearing steel, 6" wide, 1½" or 1¾" deep. Free book has details, sizes, specifications. Write:

TRUSCON® a name you can build on

TRUSCON STEEL DIVISION
REPUBLIC STEEL
1096 ALBERT ST. • YOUNGSTOWN 1, OHIO
Export Dept: Chrysler Bldg., New York 17, N.Y.

For more details circle NED-97 K4 on enclosed inquiry slip

Chip Away

SCALE
RUST
PAINT

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for complete details

AURAND MFG. & EQUIPMENT CO.
2643 Colerain Ave., Cincinnati 14, Ohio

For more details circle NED-98 K4 on enclosed inquiry slip

The BIG Tool and Job Capacity

18" CLAUSING DRILL PRESS with *power feed*

★ Drills 1" cast iron, ¾" steel ★ No. 3 Morse Taper, 6½" spindle travel ★ HEAVY-DUTY GEAR-DRIVEN POWER FEED TO TAKE FULL ADVANTAGE OF THIS BIG TOOL AND JOB CAPACITY.

An 18" heavy-duty drill press, with larger tool and job capacity, PLUS a heavy-duty GEAR-DRIVEN power feed to make effective use of its capacity. The power feed, with its large heavy-duty gears, is positive and sure — NO belt slippage to reduce power. Feed selection is instant — BY DIAL — no belts to change. Add the Clausing features of new spindle bearing engineering, vernier depth stop, and exclusive head and table positioning mechanism — and you know this is a tool that can save you plenty on both set-up and operating time. Get all the facts before you buy any drill. See your ATLAS CLAUSING Dealer!

WRITE FOR LITERATURE —TODAY!

Atlas CLAUSING

CLAUSING DIVISION—ATLAS PRESS COMPANY
10-113 N. PITCHER ST. • KALAMAZOO, MICHIGAN

For more details circle NED-99 K4 on enclosed inquiry slip

Now . . . leakproof coupling by hand in Rego* GX welding torch

Now Rego tip and mixer can be tightly coupled to Rego GX Torch handle simply by a twist of the hands, thanks to new gas-tight neoprene seating rings. These tough, long-wearing gasket-type rings form a perfect seal. They take all the abuse. Dust and sand in air won't harm metal seating surfaces or break gas-tight seal. Eliminates costly periodic re-seating of torch heads, gives longer torch life. Rego KXA Cutting *Attachment* can similarly be attached with hand tightening.

*T.M. of the B. B. Co. Chicago

Branches and dealers from coast to coast

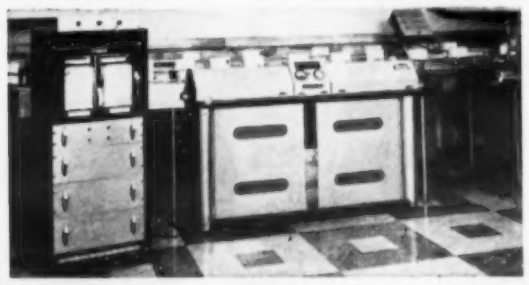
Copyright 1954, National Cylinder Gas Company

NCG® National Cylinder Gas Company
840 N. Michigan Ave., Chicago 11, Illinois

For more details circle NED-100 K4 on enclosed inquiry slip

THE THOMPSON ELECTRIC CO.
1138 POWER AVENUE • CLEVELAND 14, OHIO

▲ For more details circle NED-101 K4 on enclosed inquiry slip ▲



SELECTROL Weighs, Classifies, Sorts, and Records Weights of Your Entire Production Output

SELECTROL sorts your high-speed production into three classifications: over-weight, under-weight, and correct weight. Immediate savings are effected—correct weights require no further handling. Over-weights and under-weights are diverted for correction. Simultaneously, the Range and Average Recorder charts each unit as it flows over the SELECTROL. It tabulates the average weight in groups of consecutive packages, and the range of weights within the same groups. This statistical information provides a sound basis for accurate adjustment of filling or processing operation. In addition, a running count is made of all packages in each weight classification. Write today for complete details.

THE EXACT WEIGHT SCALE CO.
930 W. Fifth Avenue, Columbus 8, Ohio
P. O. Box 179, Station 5, Toronto 18, Ont.

▲ For more details circle NED-102 K4 on enclosed inquiry slip ▲

Here's How to rate the EFFICIENCY of your COMPOUND MELTERS

The rate of efficiency which your plant reaches in the melting of compounds, pitches, tars, wax or soft metals, may never show up prominently on your cost records. But the costs are *there* and the efficiency of compound melting (or the lack of it) affects total manufacturing cost whether you notice it or not.

So, the next time you walk past your compound melting operation why not ask a few pointed questions?

50 gal. compound melter with power agitator.

For instance, ask . . .

Does the melter overheat and burn the contents, thus destroying the batch so it must be discarded?

Does the melter leave cold lumps of unmelted material in areas farthest from the heat?

Do valves or outlets freeze and clog?

Can the dispensing rate keep pace with production requirements?

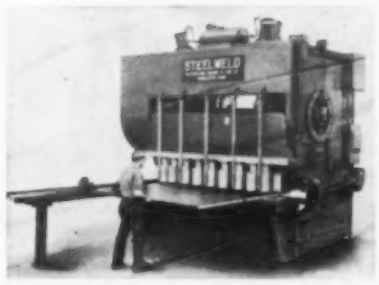
Because of its basic good design, *every* Sta-Warm melter from 1 qt. to hundreds of gallons cap. satisfactorily controls the above points of irritation where production delays are caused and where costs soar.

For catalog sheets describing Sta-Warm high-efficiency compound melters, inquire today. Outline your general requirements.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

▲ For more details circle NED-103 K4 on enclosed inquiry slip ▲

STEEL PLATE SHEAR
for plate to 1½ in. thick, 8 ft long

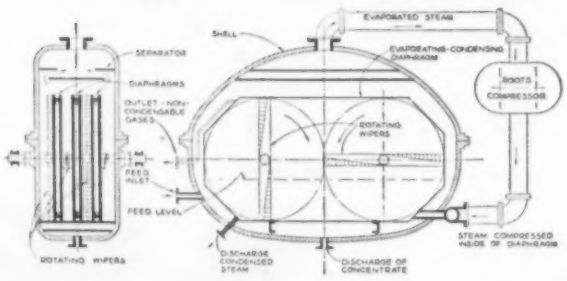


Operating at a speed of 22 strokes per minute, model 24G-8 Steelweld shear is designed for production shearing of steel plate in sizes up to 1½ in. wide and 8 ft long. Electric foot-switch controlled, machine has air-powered clutch and brake unit. Shearing blade is of the pivoted type, and has two counterbalances to cushion impact. Blade is set for thickness of metal being cut simply by turning a hand crank until a pointer indicates the correct thickness on the large dial indicator. Main and eccentric bearings are automatically oiled. Machine will handle slitting and notching work. Made by **Cleveland Crane & Engineering Co.,** 1143 E. 283rd St., Wickliffe, O.

▲ For more details circle NED-104 K4 on enclosed inquiry slip ▲

SELF-CLEANING EVAPORATOR
nonfouling type in capacities to handle 65-6000 lb distillate/hour

Problem of scale formation on heating surfaces inherent in evaporating processes is solved in the SEBAVA evaporator by means of revolving stainless



steel wipers which maintain clean, nonscaling heat transfer surfaces. The wipers, by spreading thin film of liquid over heating surfaces, also produce high turbulence, helping to speed evaporation.

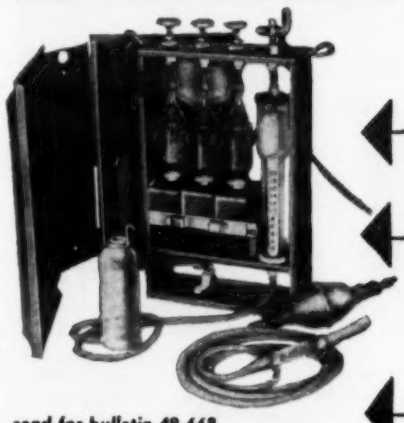
Evaporator is currently used in production of distilled water from sea, well and river water; the concentration of chemical solutions; and for crystallization of sodium chloride, caustic soda and boric acid from aqueous solutions. With little modification, unit can be adapted to drying processes including vacuum drum and circulation drying.

Capacities range from 65 lb to 6000 lb per hour. Power requirements are about 8 kwhr per 1000 lb of distillate. Unit is available in stainless steel or other corrosion-resistant material. Made by **Dresser Industries, Inc.,** Roots-Connersville Blower Div., Dept. J, Connersville, Ind.

▲ For more details circle NED-105 K4 on enclosed inquiry slip ▲

Analyze for CO, CO_2, O_2 with one instrument

HAYS ORSAT GAS ANALYZER



Complete—3 absorption units provide complete gas analysis for all the operating engineer's needs.

Rugged—built for continuous field use . . . strong, pressed steel construction.

Portable—contains everything you need to make a complete analysis . . . in one easy-to-carry case. Compact, yet all parts are easily accessible.

send for bulletin 49-668 for complete description of all styles.

The Hays Orsat Type Gas Analyzer is simple, fast, and employs the most reliable method known for obtaining accurate measurement. Available in one, two or three-unit styles (illustrated).

THE HAYS CORPORATION
MICHIGAN CITY 15, INDIANA
combustion and industrial instruments and control

▲ For more details circle NED-106 K4 on enclosed inquiry slip ▲

At left: Jacketed 3-Way Plug Cock.

Below: Cutaway section of Jacketed Cock, showing packing gland construction.

H&B ESTABLISHED 1897

Jacketed Pipe, Pumps, Valves and Fittings . . .

Regardless of whether the material is being heated or cooled in the processing, and what heating or cooling medium is being used, H & B jacketed fittings are available for all applications. Steam, hot water or hot oil may be used for heating, cold water or brine for cooling.

H & B can save you money on your jacketed pipe and fitting requirements because we buy all standard size pipe from the mill in carload lots, make our own special flanges in quantities, and are tooled up for making jacketed equipment at lowest possible price. Write for Bulletin J-50.

Hetherington & Berner Inc.
751 Kentucky Avenue • Indianapolis 7, Indiana

▲ For more details circle NED-107 K4 on enclosed inquiry slip ▲

new **variable vane feature adds more advantages to Norgren**

micro-fog lubricators for air tools and cylinders

increases operating range of air flow...1 unit has working range of several conventional lubricators.

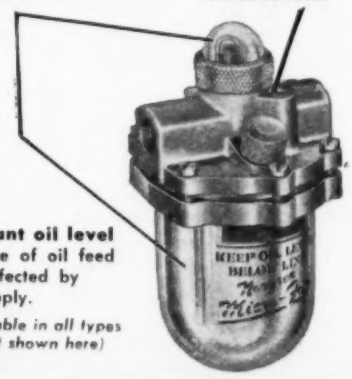
¼" . . . . . 5 to 40 cfm
⅜" & ½" . . . . 5 to 100 cfm
¾" & 1" . . . . 5 to 250 cfm

simple adjustment inside the dome of the lubricator provides wide range of air flow for varying conditions or different applications, which previously required several lubricators: For instance, at 80 psi, the ⅜" size can be easily set for a low flow range of 5 to 9 cfm or up to a high flow range of 50 to 100 cfm. Transparent bowl (½ pt.) or tank types (1¾ or 4½ gal.).

OTHER EXCLUSIVE FEATURES OF NORGREN MICRO-FOG LUBRICATORS

360° visibility of both the oil feed and oil supply . . . no guess work.

oil feed controlled by auxiliary air circuit . . . gives an accurate and uniform rate of oil feed.



constant oil level . . . rate of oil feed not affected by oil supply.

(Available in all types but not shown here)

PIONEER AND LEADER IN OIL-FOG LUBRICATION FOR 26 YEARS

Norgren C. A. CO.
3405 So. Elati, Englewood, Colo.

Valves • Filters • Regulators • Lubricators • Hose Assemblies

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Tempilstik° FOR ALL HEAT-DEPENDENT OPERATIONS

looks like a crayon... marks like a crayon... tells temperatures like a precision instrument!

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000° F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures—plus or minus 1%.

ALSO AVAILABLE IN LIQUID AND PELLET FORM... WRITE ADVERTISING DIV. FOR SAMPLE TEMPIL° PELLETS... STATE TEMPERATURES OF INTEREST—PLEASE!

Tempil° CORPORATION
132 WEST 22ND STREET, NEW YORK 11, N. Y.

For more details circle **NED-110 K4** on enclosed inquiry slip

Selection of the exact speed to meet changing operating conditions . . . correction for operator ability . . . adjustment for various size parts or differences in size and composition of materials can be made instantly with the Lovejoy Select-O-Speed Variable Speed Transmission. Almost an infinite number of speeds can be obtained—**while the machine is running.** Easy, finger-tip speed adjustment provides better production control and improved product quality. Operator fatigue is greatly reduced, assuring efficient and economical machine operation. Lever or hand wheel control. Fractional sizes to 5 hp. Ratios to 10 to 1.

Send for Catalog and complete engineering data.

LOVEJOY FLEXIBLE COUPLING CO.
4803 W. LAKE STREET • CHICAGO 44, ILLINOIS
Also Mfrs. of Lovejoy Universal Joints & Lovejoy Universal Couplings

For more details circle **NED-111 K4** on enclosed inquiry slip

Great Motors from Great Britain!

- world-famous NEWMAN MOTORS
- net savings up to 40%
- immediate delivery
- unconditionally guaranteed
- superior design— to N.E.M.A. standards

For the first time, the complete world-famous line (2 million installed in 62 countries since 1935) of NEWMAN MOTORS, built to N.E.M.A. standards, is offered to the American Market in sizes up to 230 H.P.

These are new, high-quality motors stamped with the prestige of a great motor-making company. Vast savings, dependability, unconditional guarantee are offered to American buyers.

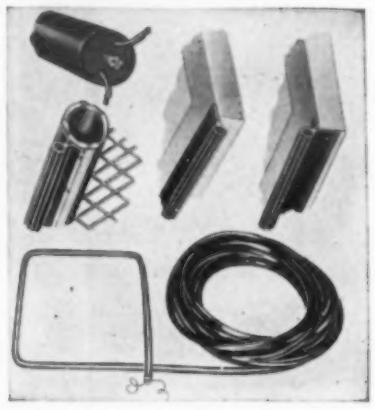
Any motor sent free and without obligation for examination and testing. Factory stocks at New York, Chicago, Savannah, Houston, Portland, San Francisco and Los Angeles.

Write for a catalog and price list to-day

Newman INDUSTRIES (AMERICA) INC.
43 BROAD STREET, NEW YORK 4, N.Y.

For more details circle **NED-112 K4** on enclosed inquiry slip

EXTENDED LENGTH SWITCH contained in ½-in. plastic tube, operates by hydraulic pressure

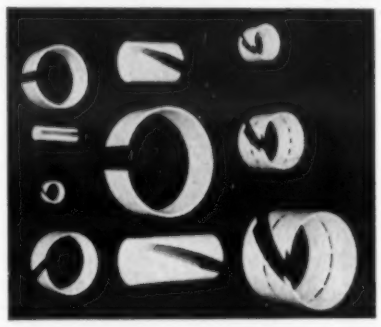


Self-contained in ½-in. flexible plastic tube, Hydratube extended length electrical switch is sensitive to contact or pressure throughout its entire length. Switch can be used as safety edge on electrically operated doors in garages and elevators; as a control device on long machines; and as an automatic cut-off control on conveyor lines. Tube which is filled with hydraulic fluid can be bent in excess of 90 degrees without impairing switch operation.

Adjustment can be made so that pressure as low as 1 oz will actuate switch when installed in a horizontal plane. Capacity of palladium contacts is 1 amp when switch is adjusted for 6 to 8-oz pressure. Hydratube is offered in standard lengths of 6 and 12 ft, or ordered lengths up to 300 ft. Special extruded rubber cover is also available for mounting tube on flat, round or uneven surfaces. Made by **Recora Co.,** Dept. E-3, 56 W. 103rd St., Chicago 28, Ill.

For more details circle **NED-113 K4** on enclosed inquiry slip

NYLON BEARING LINER readily installed in equipment



Heretofore available only in combination with metal bearing shell, Nylined nylon bearing liners are installed directly in equipment. Two types of liners include one that is used in standard bearings for applications requiring lubrication. This one has spiral compensation gap that corrects for expansion and contraction of nylon. Interlocking portions prevent loss of oil from ends of bearing after it has been circulated through oil distribution slot. Second type is simplified liner with straight or spiral compensation gap. It has no interlock or oil distribution grooves. Because latter type requires moderate amount of special tooling, they are usually employed in moderate or large volume applications. Various methods for retaining liners in equipment have been perfected, and service is offered to aid in applying bearings to user's needs. Made by **Thomson Industries, Inc.,** 1035 Plandome Rd., Manhasset, N. Y.

For more details circle **NED-114 K4** on enclosed inquiry slip

Drill More Holes Per Hour In ANY Pattern... On ANY Drill Press

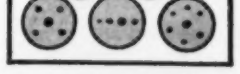
with a *Adjustable* **MULTI-DRILL**

DRILLS 2 to 8 HOLES at ONE STROKE

Increase production up to 800% ... save time, cut costs. MULTI-DRILLS make *any* drill press produce *more.* Attached without alterations or special tools. Quick, easy setups of universally adjustable spindles give you more flexibility . . . wider application. Handles any hole pattern within 9" circle; centers close as ½". Extension Spindles available to increase working area to 22½". Special adaptations available.

model 900

DRILLS ANY HOLE PATTERN



See us at Booth 1309, National Metal Show, Chicago

COMMANDER MFG. CO.
4220 W. Kinzie St. • Chicago 24, Illinois
Product of *Commander*... Builder of Production Tools

For more details circle **NED-115 K4** on enclosed inquiry slip

5411

"ONE MAN CREW"

When you see PORTELVATOR (R) (the handy Hamilton portable elevating table) doing the lifting and moving jobs which previously required the combined strength of three or more husky men you will know why so many present users call it a "one man crew."

(Prices start at $155.00*) Get one—and start it to work in your operation.

WANT THE COMPLETE FACTS? Write for Bulletin No. 5411—Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

IT'S A **Hamilton Tool** USE IT WITH CONFIDENCE

*Prices subject to change without notice.

For more details circle **NED-116 K4** on enclosed inquiry slip

See where B&D Hammers save you time and money!

From drilling in concrete and lagging-down machines to chiseling castings and holing-through walls, B&D Electric Hammers get more jobs done faster, better, cheaper! No other Hammers have so many features for comfort and safety. No other Hammers give you so much working power in so little weight at such low price! Get the facts on how to save with B&D Hammers. No other Hammers do so many hundreds of jobs in industry so *well*—in drilling, digging, piercing, breaking!

NEW BOOK shows how!

Get this great B&D Hammer Handbook *FREE*!!! Page after page of on-the-job photos *show* you how you can save time, cut costs on dozens of jobs in your operation! In lagging-down ... in channeling ... in scaling ... in smashing ... in breaking ... *wherever* impact is called for. Write: THE BLACK & DECKER MFG. CO., Dept. 609, Towson 4, Maryland. Meanwhile, ask your B&D distributor for a demonstration!

For nearest distributor, see "Tools-Electric."

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker
PORTABLE ELECTRIC TOOLS

For more details circle **NED-117 K4** on enclosed inquiry slip

ILLUMINATED MAGNIFIER

for inspection and assembly

Operator has both hands free. Complete unit including adjustable stand, with precision wide-field lens designed for use at "normal" working distance from eyes. $13.50. See complete line of industrial magnifiers $1 to $25, stocked by leading industrial suppliers. Bausch & Lomb Optical Co. 51634 Bausch Street, Rochester 2, New York.

Write today for tell-all handbook and catalog, "INDUSTRIAL MAGNIFIERS, HOW TO CHOOSE AND USE THEM"

BAUSCH & LOMB
Industrial Magnifiers

▲ For more details circle **NED-118 K4** on enclosed inquiry slip ▲

Naturally—there's only one answer . . . National Vulcanized Fibre! Its inherent properties are: great mechanical strength, high dielectric strength, arc resistance, excellent machinability, good forming qualities, strong resistance to wear and abrasion, durability and lightness in weight. And, we might add another—ability to conform to special requirements, including degrees of hardness, density, flexibility, toughness, or surface finish!

With all this in combination, is there any wonder that National Vulcanized Fibre is the answer to a design or production engineer's dream? In thousands of uses in many industries, it has a 70-year record for versatility which no other material can match! And the end is still out of sight . . . new uses crop up by the day.

what material excels them all in physical properties?

Perhaps in your own business there's a place where National Vulcanized Fibre can do one more good job—or a better job than is being done now by something else. We have complete facilities (including the finest of fabricating shops) to fill your needs. A fully detailed catalog might be helpful. May we send one? Write to the address shown below, Dept. J-10.

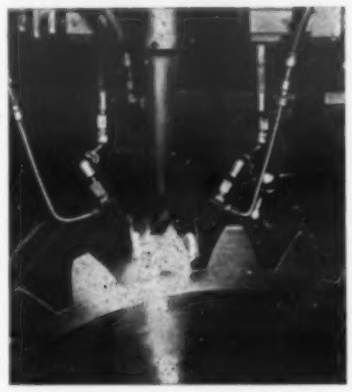
• *National also manufactures Phenolite Laminated Plastic, Peerless Insulation, Vul-Cot Waste Baskets, Materials Handling Equipment and Textile Bobbins.*

NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE
FIRST—IN MAKING THE MOST OF LAMINATED PLASTICS

▲ For more details circle **NED-119 K4** on enclosed inquiry slip ▲

GEAR SURFACE HARDENERS

electronically controlled machine accommodates various gear types



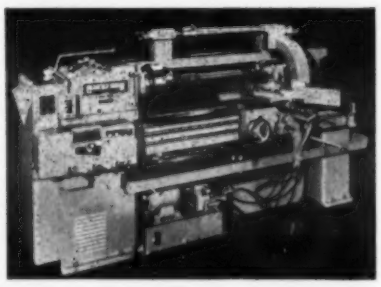
Sensitive radiation pyrometer focused on the gear tooth being heated on improved gear surface hardeners automatically controls travel of burners along the tooth. Optimum hardening temperature is preset by the operator and all teeth on all gears are uniformly hardened. Wide variety of steels, both forgings and castings, can be surface hardened by the oxyacetylene machines.

Normally machines are indexed so that teeth hardened successively are nonadjacent, thus eliminating possibility of change in bore diameter. Water or oil quenching can be incorporated. Machines are adaptable to hardening straight or spiral bevel, Zerol, spur, herringbone or helical gears. Two models take gears up to 120 in. pitch diameter. Made by **Gleason Works,** 1006 University Ave., Rochester 3, N. Y.

▲ For more details circle **NED-120 K4** on enclosed inquiry slip ▲

TRACER LATHE

made in 6 to 12-ft bed lengths to produce from flat or round master



All geared head, 12 spindle speeds and 32 feed changes are features of this 18-in. tracer controlled engine lathe. It is powered by a 5-hp motor, has spindle speeds up to 1140 rpm and is offered in 6 to 12-ft bed lengths. Independent sealed pumping unit is mounted under the chip pan and tracer valve is mounted on an overarm. System operates at maximum pressure of 400 psi and has a total holding force of 1650 lb.

Template carrier, mounted high for maximum operator visibility, is furnished for round masters which may be produced on the machine. Flat master attachment is available. Entire machine capacity can be used for tracer work. Tool slide is positioned on a 45-degree angle and permits a maximum diameter change up to 6 in. with maximum work swing of 10½ in. over the carriage.

Four-position tool post is standard part of tool slide. Other features are 90-degree in-feed controlled by double ball crank, automatic feed throwout clutch and hinged chuck guard. Made by **Rockford Machine Tool Co.,** Dept. R, 2498 Kishwaukee St., Rockford, Ill.

▲ For more details circle **NED-121 K4** on enclosed inquiry slip ▲

CRANE WHEELS AND WHEEL ASSEMBLIES

INSTALL THESE WHEEL ASSEMBLIES complete with axles, bearings, drive gears, grease fittings and all necessary parts for a complete installation. There are sizes, types, and styles of mounting to suit every requirement.

DOUBLE FLANGED WHEELS range in standard tread diameters from 7½" to 24"; SINGLE FLANGED WHEELS from 4" to 8". Wheels are available unmounted or in completely assembled units.

WRITE FOR CATALOG Complete line of Downs Crane Wheels and Assemblies are illustrated and described in new Catalog No. 3540. Specifications included. Write today!

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
540 W. VERNON AVENUE
LOS ANGELES 37, CALIF.

Electric Cranes • Hand Cranes • Jib Cranes • Sheaves • Sheave Blocks • Plate Grips • Plate Hooks • Crane Trolley Hoists • Crane Wheels • Crane End Truck Units • Jib Crane Fittings • Automatic Mechanical Load Brake Crane Hook Blocks

▲ For more details circle **NED-122 K4** on enclosed inquiry slip ▲

IS YOUR ARC WELDING
CURRENTLY ANEMIC?

Is your arc current *starved* due to poor connections at lugs, quick connectors, grounds and in holders?

Do your operators have to stop occasionally to cool off electrode holders due to *hot handles* caused by poor connections or use *two holders* where one should do the job?

Does your weld quality suffer due to volt and amperage variations during the welding cycle?

You can eliminate these troubles. Just specify CADDY Accessories and cable splices using 100% solid copper CADWELD connections throughout.

CADDY alone gives you a 100% Copper Circuit from the power line through the welding machine *right* to the electrode.

CADDY®
ARC WELDING ACCESSORY DIV.
ERICO PRODUCTS, INC.
3070 E. 61st PLACE • CLEVELAND 3, OHIO

WRITE TODAY FOR NEW 1955 CADDY CATALOG

▲ For more details circle **NED-123 K4** on enclosed inquiry slip ▲

PAGE FENCE *-Since 1883*

• AMERICA'S FIRST WIRE FENCE •

• Page Chain Link Fence, pioneered by Page and made only by Page, is quality controlled from raw metal to erected fence. Whether you choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum, you'll have a rugged fence on sturdy metal posts deep-set in concrete. Choose any one of 8 basic styles, varied by heights, types of gates, posts, top rails and barbed wire strands for extra protection. And to be sure of reliable workmanship your fence will be expertly erected by a specially trained firm. For helpful Page data and name of member nearest you—

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle **NED-124 K4** on enclosed inquiry slip ▲

"SHADE"

Remarkable Vinylite Sheeting that ABSORBS Heat and Glare

SHADE will never become brittle or crack even in temperatures from —25 to 150 F. All you need is a squeegee, a bucket of water, and some pieces of factory pre-cut SHADE to eliminate glare and heat. Easy to apply, permanent and washable, SHADE is custom cut to fit your windows—Order yours today!

The unfiltered rays of the sun, even on a cloudy day, can be a major cause of fatigue. SHADE is a specially formulated compound to filter light!

NO MORE PAINTING
No need for repeated painting of glass surfaces: with SHADE you have an easily applied filter, *bonded* to the glass. It won't crack or grow brittle.

EASY TO APPLY
Application requires no special skill or tools. It is pre-cut at the factory. Wet, place polished side to glass, squeegee out excess water.

PERMANENT
Following out this procedure will effect a permanent bond. SHADE will never come off until you pry up a corner and strip it off yourself.

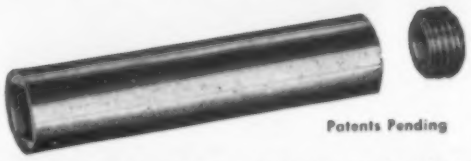
WASHABLE
Can be washed like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

COLOR CHOICES
Colors are available: FROSTED TRANSLUCENT, ARCHITECTURAL BLUE, TRANSPARENT BLUE, FILTER WHITE, OLIVE GREEN, TRANSLUCENT GREEN and BLACKOUT BLACK.

TRANSEAL, Ltd.
Dept. NED, 100 Oak Tree Ave., South Plainfield, N. J.
Telephone PLainfield 6-3800

▲ For more details circle **NED-125 K4** on enclosed inquiry slip ▲

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



Patents Pending

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES: 3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE
23514 TELEGRAPH RD., DETROIT 19, MICH.

▲ For more details circle NED-126 K4 on enclosed inquiry slip ▲

for a better grasp of any fastener problem — CAMLOC

QUARTER-TURN FASTENERS

MEAN QUICK ACCESS. On panels doors or covers Camloc Fasteners provide positive locking by a quarter-turn with a screw driver or wing head. Vibration-proof, Camloc Quarter-Turn Fasteners cost less to install... minimize replacement... fewer do the job.

HEAVY DUTY LATCHES

SAFELY AND EASILY OPERATED. High shear-tension capacity... open and close under heavy loads... spring-loaded handle... retracting shear pin... positive locking.

SPECIAL PURPOSE FASTENERS

SUITED TO YOUR NEEDS. In the electronic, aircraft, machinery and other fields, leading equipment manufacturers are using Camloc-designed special fasteners for quicker accessibility.

Send for catalog or call us if you have a fastener problem.

CAMLOC FASTENER CORPORATION
80 Spring Valley Road, Paramus, N. J.
WEST COAST OFFICE: 5410 WILSHIRE BLVD., LOS ANGELES, CAL.

▲ For more details circle NED-127 K4 on enclosed inquiry slip ▲

WIEDEKE IDEAL TUBE EXPANDERS

for rolling sleeves in diesel cylinder heads

Typical cross section of Cylinder Head showing Sleeve. Expander with short Mandrel used at upper end. Expander with long Mandrel used at lower end.

Two style Expanders are shown, other styles quoted promptly. Please supply us with full details of your requirements.

See your Dealer or write us for Bulletin.

THE GUSTAV WIEDEKE COMPANY
DAYTON 1, OHIO

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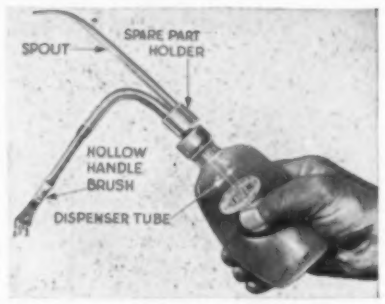
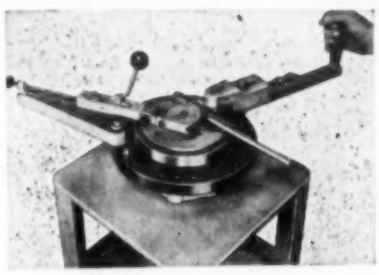
LIQUID DISPENSER will not break or spill



Any desired amount of soldering flux, lubricant, layout fluid, cutting oil or other fluid can be metered out through the hollow - handle brush or interchangeable spout of the Nu-Aid liquid dispenser. Flow is easily controlled and continues as long as pressure is applied to the unbreakable Adcolene plastic bottle. Fluid is sucked back into the bottle when squeezing is stopped. Nonspilling squeezable 8-oz unit is unharmed by acids, alkalis, oils and solvents. Made by **Aids Development Co.**, Box 2704, Cleveland 11, O.

▲ For more details circle NED-129 K4 on enclosed inquiry slip ▲

CLAMPING DEVICE holds tubing, angles in forming



In tube, angle, channel and extrusion forming operations on model 1 and 1A Di-Acro benders, this Quik-Lok clamping device can be employed to lock material securely in position. Device can be easily adjusted for any radius to 2 in. on the model 1 bender and 6 in. on the 1A. It handles stainless steel tubing up to ½-in. diameter, round steel bar up to ⅝-in. and other materials within capacity of the benders. Clamp can be instantly released for part removal. One tube clamp block of specified diameter is provided with each clamp. Made by **O'Neil-Irwin Mfg. Co.**, 582 Eighth Ave., Lake City, Minn.

▲ For more details circle NED-130 K4 on enclosed inquiry slip ▲

DEEP-THROATED CLAMP in 4, 5, and 6-in. capacities

Tensile strength of 90,000 psi and yield strength of 75,000 psi are characteristics featured by this B & C deep-throated, ductile iron clamp. Screws have standard Acme threads for rapid adjustment and are fitted with rocking swivel pads and sliding, vise-type handles for ease of operation. Clamps are available in 4, 5 and 6-in. capacities. Made by **Brink & Cotton Mfg. Co.**, 114 Poland St., Bridgeport, Conn.

▲ For more details circle NED-131 K4 on enclosed inquiry slip ▲

IF YOUR AUTOMATION PROGRAM INCLUDES LIQUID MEASURING...

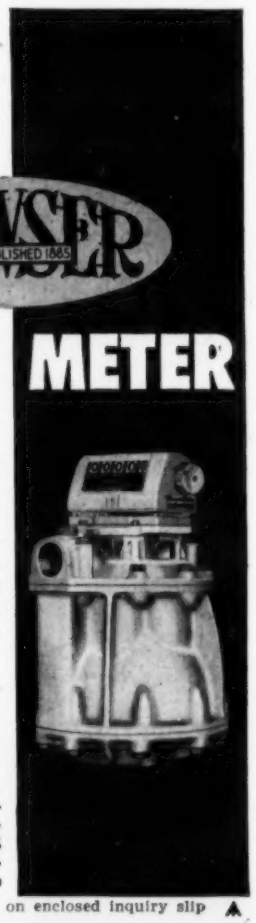
Start with a BOWSER ESTABLISHED 1885

XACTO METER

"—the world's most widely used meter!" Wherever liquid has to be measured, Bowser XACTO meters have proved to be accurate and dependable in all kinds of industry.

Today over 856 different types of liquids are safely handled by Bowser XACTO meters. Chances are they could be your answer to increased production and substantial reductions in operating costs.

Write TODAY for complete XACTO data!



BOWSER, INC.
1381 Creighton Ave.
Fort Wayne 2, Ind.

REGIONAL OFFICES: SALES OFFICES—ATLANTA • CHICAGO • CLEVELAND • DALLAS • DETROIT • KANSAS CITY • LOS ANGELES • NEW YORK • PITTSBURGH • SAN FRANCISCO • HAMILTON, ONTARIO

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5413

PRECISION SMALL HOLE DRILLING

Should always be done on the

HAMILTON VARIMATIC®

STURDY
BENCH TYPE
VARIABLE SPEED
SUPER SENSITIVE
PRECISE

For complete information write for our FREE Bulletin No. 5413. Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

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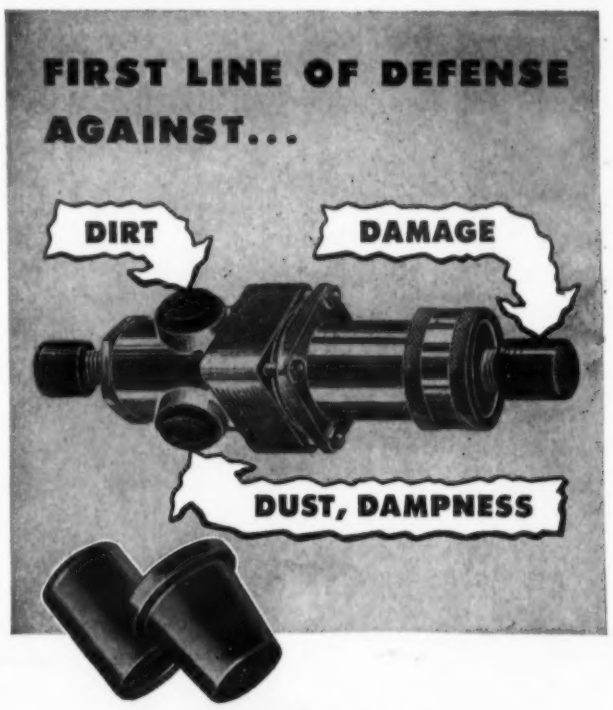

S.S.WHITE ELASTOPLASTIC PLUGS AND CAPS

When you invest money in an expensive part or piece of equipment, it's just good business to protect your investment against needless damage during shipment and storage. And one way to do this — at minimum cost — is with S.S.White Elastoplastic Plugs and Caps. These inexpensive flexible plastic plugs and caps are designed to cover or seal important openings or studs. They keep dirt and moisture out of interior parts — protect the protruding ends of tubing and studs against damage — and seal in hydraulic fluids.

Besides being low in cost, S.S.White Elastoplastic Plugs and Caps are easily applied and removed — they're unaffected by oil, grease and gasoline and are available in a wide range of sizes for every need.

WRITE FOR BULLETIN P-5312

It has full details on S.S.White Elastoplastic Plugs and Caps. Sample plugs and caps can also be furnished on request.

THE S.S.White PLASTICS DIVISION
DENTAL MFG. CO.
Dept. 7P, 10 East 40th St.
NEW YORK 16, N. Y.
Western District Office • Times Building, Long Beach, California

▲ For more details circle NED-134 K4 on enclosed inquiry slip

Leonard Tubemaster

TUBE • *Flaring*
• *Beading*
• *Deburring*
• *Bending* **MACHINES**

Model 2CP
⅛" to 2" Capacity

Consult Our Tube Specialists Division
for Production Tube Processing

LEONARD PRECISION PRODUCTS CO.
9200 BOLSA AVENUE SANTA ANA, CALIF.

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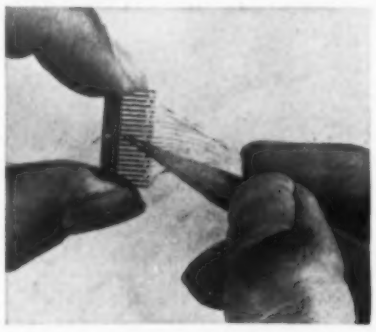
HEAT-SENSING CELLS
extremely sensitive to any type heat



Twenty light-and-heat sensitive cells are contained on the ¾-in. long bit of glass in the illustration. Smaller than the pencil point, they are highly sensitive to invisible rays of the near-infrared, to ultraviolet and all colors of visible light. Ektron Detectors, as the cells are called, can be used as switches, to monitor fluid composition in process lines on the basis of the characteristic infrared "color" of the various components, and for many other purposes. They are so sensitive that they respond to "light" from a lamp operated so far below rated current that its glow is invisible. Cells are simple and can be manufactured in any shape or size. They are suitable for rough-service application. Made by **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

▲ For more details circle NED-138 K4 on enclosed inquiry slip ▲

LOW COST, RUGGED
Hydraulic
SKID TRUCKS
for loads up to 1000 lbs!

★ HYDRAULIC RAISING & LOWERING
★ PUSHES OR PULLS
★ FLOOR PROTECTIVE WHEELS
★ ALL STEEL WELDED CHASSIS
★ LIGHT WEIGHT
★ COVERED STEEL PLATFORM USED AS PLATFORM TRUCK

● Fully illustrated bulletin HST-19 describes this versatile truck in detail. Write for it today. Catalog GP-17 describing many standard Ironbound cost-saving units will be sent you without obligation, too.

IRONBOUND BOX & LUMBER COMPANY
55 Hoffman Place, Hillside, New Jersey

Ironbound — **IRONBOUND**

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, SKID TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle NED-141 K4 on enclosed inquiry slip ▲

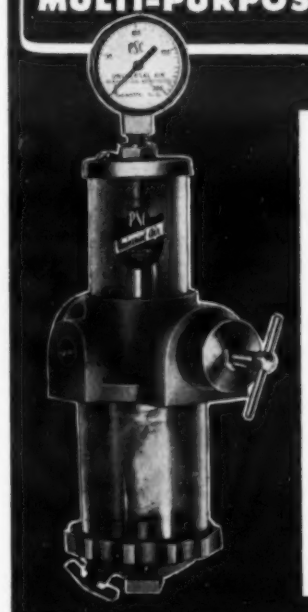
COMPOUND ANGLE COMPUTER
available in five models which rotate 360 degrees in three planes

Precise Studler compound angle computer offered in five models is versatile measuring device which surveys angles of machined parts, castings and dies. Computer rotates 360 degrees in horizontal, vertical and radial planes and is accurate to 1 moment of arc in each plane. Horizontal protractor has two verniers set 90 degrees apart, while vertical and radial protractors have one vernier each. All have 1 minute (0.0001-in.) graduations.

Compound angle plate of model E computer allows its use on bench, miller, shaper-planer, jig borer or drill press to lay out, machine and check work without removing it from plate. It holds work in any position. Other computers include the model A with 4½ x 9-in. surface plate; the A-special with a base having a 1 x 5-in. flat side true with outer edge of surface plate; higher capacity model G; and general shop work model C. Made by **Angle Computer Co.**, Dept. NE, 1709 Standard Ave., Glendale 1, Calif.

▲ For more details circle NED-139 K4 on enclosed inquiry slip ▲

AMERICA'S MOST COMPACT
MULTI-PURPOSE — REGULATOR — FILTER — LUBRICATOR

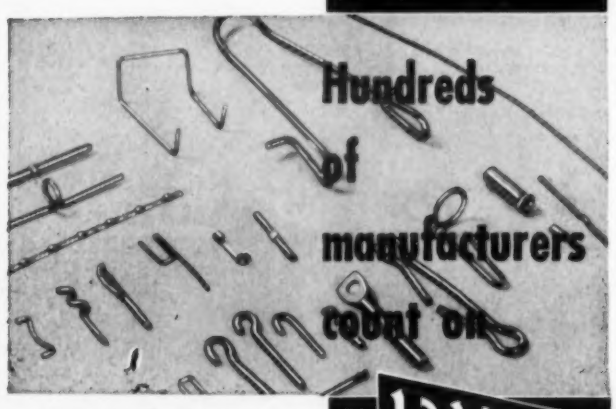


This compact combination unit (1) atomizes exact amounts of oil (2) regulates pressure, and (3) filters. It adjusts to ¼ pound and requires only two connections. Lubricator, regulator, or filter are available separately or in various combinations. Write for Bulletin No. 75.

The PSC line also includes Automatic Drain Traps, Dehumidifiers, Quick Disconnect Couplings, and Rotary Air Seals. Write for full information.

"Where *Good Connections* Count" ®
PERFECTING SERVICE CO.
(Home Office & Factory)
332 Atando Ave. Charlotte, N. C.
Chicago
Cleveland
Camden, N. J.
Providence
New York
Montreal
Toronto

▲ For more details circle NED-142 K4 on enclosed inquiry slip ▲



Experienced producers of wire formed components, Pix has the skill and the facilities to meet your needs. More . . . you get dependable supply, geared to your production schedules. See Pix for wire formings from .002" to .156" diameter. Delicate or intricate forms produced in steel, nickel, molybdenum, bronzes, and many alloys. Complete catalog available.

SEND SKETCH OR PRINT FOR 48-HOUR QUOTATION

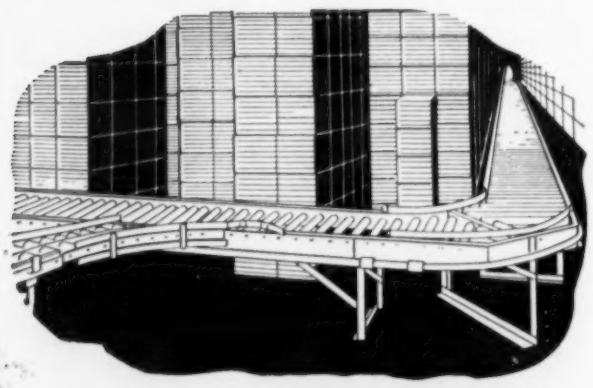
PIX for *Precision Wire Forming*

PIX MANUFACTURING CO., INC. 5 Oliver Street Newark 5, N. J.

▲ For more details circle NED-136 K4 on enclosed inquiry slip ▲

Mathews Live Roller Conveyers Play A Big Role In Modern Package Handling Systems

ELLWOOD CITY, PA.—Many manufacturers are discovering live roller conveyers to be the answer to their package conveying problems. It is possible to deflect loads and hold them on the live roller conveyers without stopping the conveyer—they can be reversible and operated at whatever speed required. *Mathews* Live Roller Conveyers can be belt or chain driven, hung close to the ceiling, set at working height on the floor or operate between buildings. Call your nearby *Mathews* representative, or ask for complete information. Write MATHEWS CONVEYER COMPANY, Ellwood City, Pa.



You'll handle it better with
MATHEWS CONVEYERS

▲ For more details circle NED-137 K4 on enclosed inquiry slip ▲

Supplementary Heat

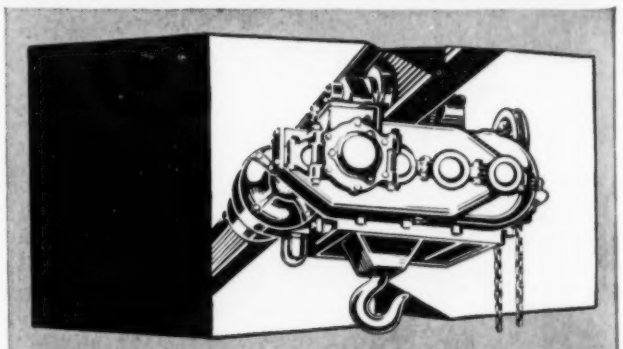
Hy-Lo Oil Burning Salamander—the ideal all purpose heater to keep men and equipment working. Produces up to 140,000 BTU per hour—uses any good grade fuel oil—one filling lasts 10 to 20 hours burning ½ to 1 gallon per hour. This low cost all purpose heater is the answer to emergency or permanent space heating. No other portable heater produces so much clean heat at so little cost.

DEALER INQUIRIES INVITED

Distributors in all principal cities—write or wire for nearest distributor.

HY-LO
Oil-Burning Salamander
SCHEU PRODUCTS COMPANY
291-C STOWELL, UPLAND, CALIF.

▲ For more details circle NED-140 K4 on enclosed inquiry slip ▲



NORTHERN HI-LIFT
Heavy Duty Hoists

Precision built for dependable, general purpose, heavy duty service. Capacities from 2 to 15 tons in standard I-beam, monorail, lug suspension or base mounted types. Bulletin H-112.

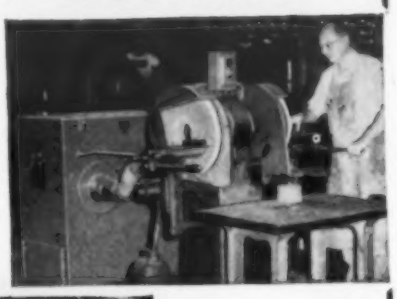
NORTHERN ENGINEERING WORKS
210 CHENE ST., DETROIT 7, MICH.

▲ For more details circle NED-143 K4 on enclosed inquiry slip ▲

STOP DUST
INSTANTLY WITH **DUSTKOP**

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

DUSTKOP

WRITE FOR
- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.
202 S. Main St. Ann Arbor, Mich.

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ACROMARK MEANS "ACCURATE MARKING"

FILL DESIGN AND LETTERING WITH ENAMEL MECHANICALLY

ASK FOR— THE **ACROPRINTER** Reg. U. S. Pat. Off.

MADE IN SEVERAL SIZES
MANUALLY OR POWER OPERATED
CONSTANTLY IMPROVED

The ACROMARK Company

WRITE TO—7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

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Generalift Pallet Boxes CUT HANDLING and STORAGE COSTS 50%

Send for free booklet

ENGINEERED CONTAINERS FOR EVERY SHIPPING NEED

General Box
1859 Miner Street, Des Plaines, Illinoi

★ ★ ★ ★ ★

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DATA DISPLAY INDICATORS
each unit can show 64 characters, system handles over 1000 words/min.

Information at rate of over 1000 words a minute can be handled by system incorporating Union indicators for data display and transfer. Indicators were engineered to display air traffic data before the controller and transfer it to next controller needing the data. By means of control equipment in the display unit itself, order in which rows of information are displayed up and down the board can be altered, individual characters can be altered, additional characters can be inserted, or an entire row of information can be erased by push-button.

Each indicator can display 64 different characters in response to codes emanating from central control equipment. Many code combinations are possible. The positioned character is stored electrically as well as visually, and the stored character can be read out into another indicator or into relays. In addition to conventional electrical circuit utilized as means of transmission, radio, microwave, carrier and radar transmitting media can be used. Made by **Westinghouse Air Brake Co.**, Union Switch & Signal Div., 1805 Braddock Ave., Pittsburgh 18, Pa.

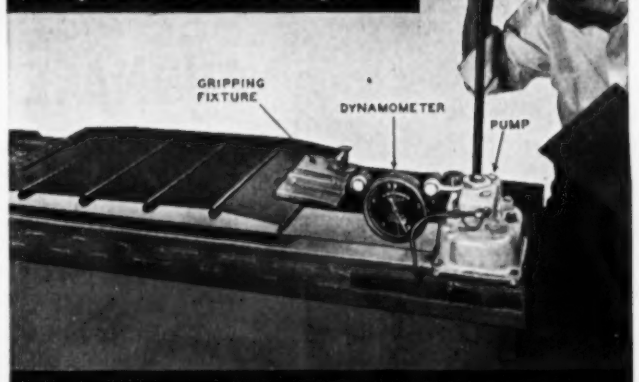
▲ For more details circle NED-147 K4 on enclosed inquiry slip ▲

PORTABLE TYPE MIXER
is adjustable-shaft propeller unit

Readily adjusted to any mixing requirements, this adjustable-shaft portable mixer employs two balanced three-blade propellers which are movable over full shaft length. This permits adjustment for optimum results for any batch depth. Saw-toothed, cut-out, perforated, collapsible and cage beater type propellers are available for special purposes. Standard shafts can be supplied in stainless, Monel, nickel, aluminum, bronze, lead or rubber coated. Hollow tube and chuck arrangement affords positive adjustment of shaft which cannot loosen or jam. Multiple mixing action clamp permits shaft and propellers to be rotated 360-degrees horizontally and 90 degrees vertically for best mixing action. Direct drive and gear driven models are available in 1/20 to 7½-hp sizes. Made by **Alsop Engineering Corp.**, 54 East Rd., Milldale, Conn.

▲ For more details circle NED-148 K4 on enclosed inquiry slip ▲

DILLON Dynamometer checking strength of joints between steel belt plates used in conveyors



Precision Built

Compact. 5" dial model measures only 8¼"x6¼"x3". Weighs 8 lbs. Fits into "tight" spots.

Accurate Dependable

MAKE *SURE* WITH A DILLON DYNAMOMETER

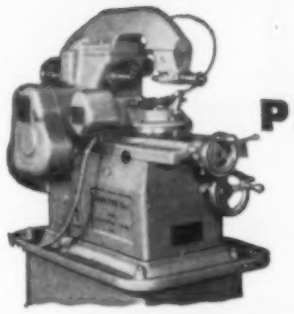
In actual field tests or in the lab., DILLON Dynamometers provide accurate test results. Measure static or moving loads instantly in conjunction with hoists, turnbuckles, air pistons, etc. 13 capacities from 0-500 lbs. up to 0-100,000 pounds. With max. pointer. WRITE FOR ILLUSTRATED LITERATURE AND FREE TENSILE STRENGTH COMPUTER.

W. C. DILLON & CO., INC.
14620NE KESWICK STREET
VAN NUYS, CALIF. (Suburb of Los Angeles)

▲ For more details circle NED-149 K4 on enclosed inquiry slip ▲

5416

CUT COST of PRECISION gear PRODUCTION



THIS FACT has been demonstrated time and time again

If you produce small, fine pitch, precision gears, up to 6" O.D. of the gear blank, use of the Hamilton Precision Gear Hobber will enable you to attain more gear precision with no sacrifice in gear production, or increased gear production with no sacrifice in gear precision . . . or both!

WANT FACTS?

Write for Hamilton Bulletin No. 5416. Address The Hamilton Tool Company 901 Hanover Street, Hamilton, Ohio.

IT'S A **Hamilton Tool**
USE IT WITH CONFIDENCE

▲ For more details circle NED-150 K4 on enclosed inquiry slip ▲

Use SIZE CONTROL REVERSIBLE PLUG GAGES

FOR FAST, ACCURATE GAGING AT LOWEST COST . .

. . . our catalog 53 tells you how!

SIZE CONTROL COMPANY
2500 West Washington Boulevard • Chicago 12, Illinois • MOnroe 6-6710
Division of
AMERICAN GAGE and MACHINE COMPANY
SIMPSON ELECTRIC COMPANY SIZE CONTROL COMPANY
WALSH PRESS & DIE COMPANY

▲ For more details circle NED-151 K4 on enclosed inquiry slip ▲

AMEs

CALIPER GAUGES—Custom-built to fit your exact need. Whether it's measuring the inside dimensions of a pipe, the wall thickness of a casting, the outside dimensions of a rocket—Ames can build the caliper gauge that fills your requirements.

Ames caliper gauges are made of carefully-finished heavy gauge steel and are equipped with an Ames exclusive: a chordal error correcting cam that assures accurate readings. Ames calipers are available with contacts of various shapes—ball, flat or pointed—made of carbide, hardened steel, or sapphire.

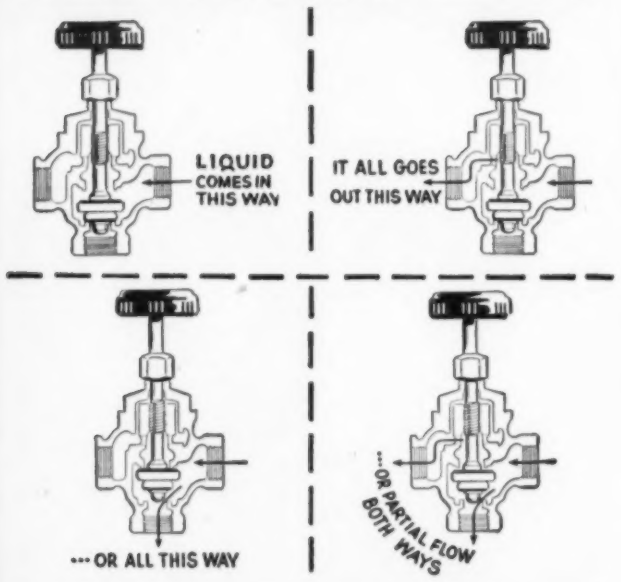
Write for your free copy of Ames catalog

Your measuring problems may involve a caliper gauge. If so, send it to Ames—for a quick, profitable solution.

Representatives in principal cities. B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

For more details circle NED-154 K4 on enclosed inquiry slip

NEW DOUBLE-SEATED BY-PASS VALVE WORKS LIKE THIS



Made of bronze alloy, designed for maximum water working pressure of 300 pounds, maximum temperature of 425 degrees F. Sizes--⅜ or ½-inch. Write for additional information.

O-B VALVES Ohio Brass MANSFIELD OHIO, U. S. A.

For more details circle NED-155 K4 on enclosed inquiry slip

ARCCO CANNON *NEVER-DRY* PEN

Writes for Months

REPLACES OTHER MAKES • USES REGULAR INKS

Regardless of pulsations or other causes of ink failures this new Never-Dry Pen will make clean and complete records. Ink supply lasts for several months without refilling reservoir. Capillary tube from ink bottle placed in instrument case feeds pen with continuous flow. Closed system sealed from atmosphere prevents clogging and dirt accumulation.

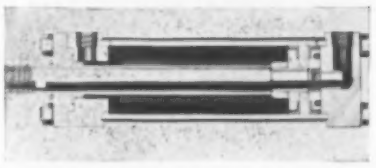
Weight of pen is constant at all times thus insuring extreme accuracy. No slopping or dripping. Stainless steel construction—no corrosion. When ordering, specify make and type of recording instrument.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

$6.00 each Net
Send for quantity prices

For more details circle NED-156 K4 on enclosed inquiry slip

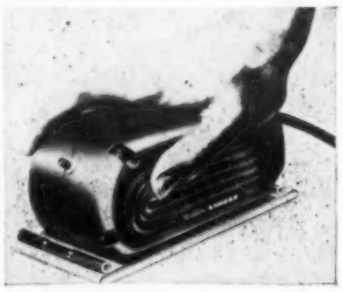
HYDRAULIC CYLINDERS
compact 2000-psi models



Minimum installation space is required for line of general purpose hydraulic cylinders due to use of square rod end and head end caps that house pipe connections. They comply with JIC standards and are rated at 2000 psi. Adjustable hydraulic cushions on either or both ends can be furnished to decelerate piston rod movement. Multiple positioning of ports and air vents and option of foot, flange (head or rod end), extended tie rod and clevis mountings permit mounting flexibility. Series is made in standard sizes from 1½ to 6 in. bore with standard or heavy duty piston rods. Made by **Vickers Inc.**, Waterbury Tool Div., 160 E. Aurora St., Waterbury 20, Conn.

For more details circle NED-157 K4 on enclosed inquiry slip

ELECTRIC SANDER
low height, vibrating type



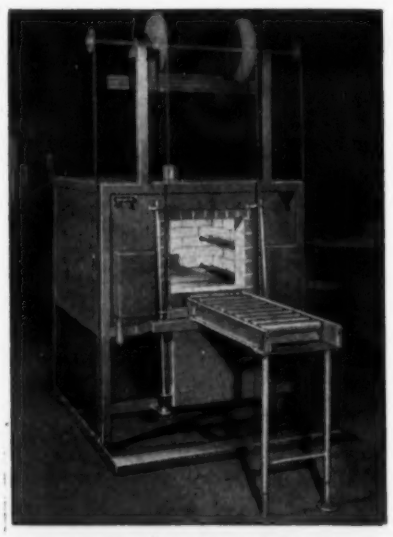
Reciprocating type motor of the model 700 electric sander vibrates its 25 sq in. of sanding area at 14,400 straight-line strokes per minute. Height of 2 15/16 in. permits use under low objects. Button-operated unit requires no lubrication, is equipped with rubber insulators between motor and plastic housing, and an 8-ft cord. Made by **Weller Electric Corp.**, 809 Packer St., Easton, Pa.

For more details circle NED-158 K4 on enclosed inquiry slip

WAREHOUSE RACK
each shelf holds up to 2 tons

Design of F-G-M warehouse racks permits a 9-ft span between post centers, facilitating insertion and removal of large objects. Shelves measure 4 x 9 ft, each being capable of holding up to 2 tons or two 48-in. pallets. Construction is of steel angle, reinforced at corners. Skeleton, wood batten or steel plate shelves are available. Posts are punched for shelf-height adjustment on 6-in. centers. Made by **Frick-Gallagher Mfg. Co.**, 112 S. Michigan Ave., Wellston, O.

For more details circle NED-159 K4 on enclosed inquiry slip



PERECO Roller Hearth *Electric* **FURNACE**

Easier Handling of Heavy Loads

This Model #RH-68 PERECO Electric Roller-Hearth Furnace is especially designed for rapid and easy handling of large or heavy loads, such as tools, dies, or products of similar nature which are difficult to load or unload from a hot furnace. Also ideally suited for enameling metal items. Typical of all Pereco Furnaces built to specialized job-requirements. Automatic temperature controls of all standard makes are available to meet the individual need. Tell us your need and let us propose the answer.

Standard and Special Units
450° F. to 5000° F.

Write Today For Catalog

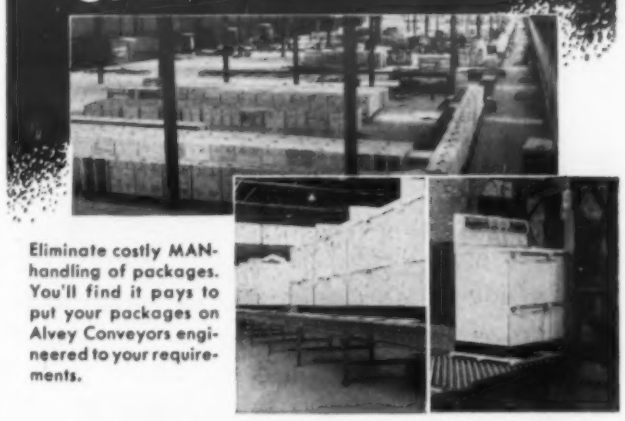
PERENY EQUIPMENT COMPANY COLUMBUS OHIO

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd. Columbus 12, Ohio

For more details circle NED-160 K4 on enclosed inquiry slip

ALVEY engineered CONVEYORS

SPEED PACKING



Eliminate costly MAN-handling of packages. You'll find it pays to put your packages on Alvey Conveyors engineered to your requirements.

In the shipping department, electric ranges are dressed for travel—moving smoothly and surely on Alvey Conveyors. Thanks to creative conveyor engineering, stove transportation is job-timed . . . work-flow is uninterrupted.

An Alvey Engineer is ready to visit your plant . . . to explain the advantages of an engineered conveyor system in your production operations.

ALV-149A

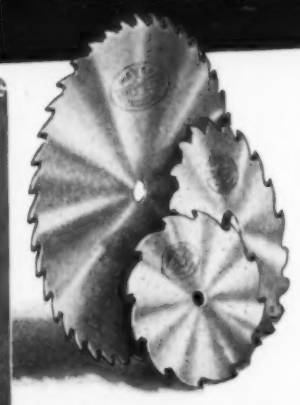
ALVEY CONVEYOR MANUFACTURING CO.
9259 Olive St. Rd., St. Louis 24, Mo.

BRANCH OFFICES IN PRINCIPAL CITIES

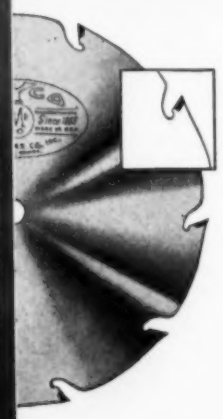
For more details circle NED-161 K4 on enclosed inquiry slip

For that *extra* quality without *extra* cost it's

MEYCO carbide tipped *Circular Saws*

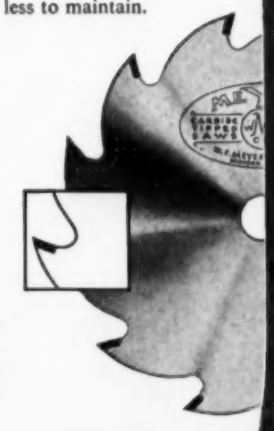


Meyco Carbide Tipped Blades, engineered for tungsten carbide, mean better results for you: A reputation built on finer workmanship and a background of experience.



SAFETY SAW

Meyco Controlled Cut Safety Saws will not grab or kick back—regulates rate of feed—economical, costs less to buy, less to maintain.



In standard sizes with standard arbors—or made to your specifications for individual applications. Write for descriptive catalog No. 19.

W. F. MEYERS CO., INC.
BEDFORD, INDIANA
MANUFACTURERS OF PRECISION TOOLS SINCE 1888

For more details circle NED-162 K4 on enclosed inquiry slip

Wickwire Rope slings are offered in both braided and single-part construction to meet a wide variety of service requirements. For additional information write to Wire Rope sales office, Palmer, Mass.

WICKWIRE ROPE
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION
2602

For more details circle NED-163 K4 on enclosed inquiry slip

DIAPHRAGMS

FOR ALL INDUSTRIAL APPLICATIONS

One of Acushnet's many specializations is in the field of diaphragms. We have achieved notable success in the design, development and molding of all types of diaphragms, with or without fabric inserts, from the size of a dime up to three feet in diameter.

Special stocks are expertly compounded with properties to resist various fluids and gases, extreme high or low temperatures, or combinations of these requirements. We are equipped to produce rubber diaphragms bonded to metal.

Acushnet PROCESS COMPANY

Send for your copy of the Acushnet Rubber Handbook, a comprehensive rubber data reference for all types of molded rubber parts.

Address correspondence to 782 Belleville Ave., New Bedford, Mass.

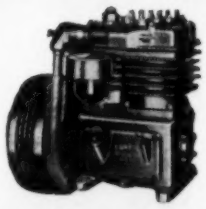
For more details circle NED-164 K4 on enclosed inquiry slip

GET MORE PRODUCTION PER MAN HOUR

with the Help of Dependable Efficient

Curtis

Air Compressors

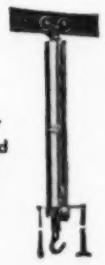


Available up to 320 cu. ft. Can be supplied base mounted up to 50 H.P. or tank mounted up to 15 H.P. Timken bearing equipped . . . precision built.

Air Cylinders and Hoists

To lift, lower, push, or pull

Pendant air hoist is ideal for lifting or lowering—Bracketed Air cylinder can be mounted in any position for lifting, lowering, pushing or pulling.



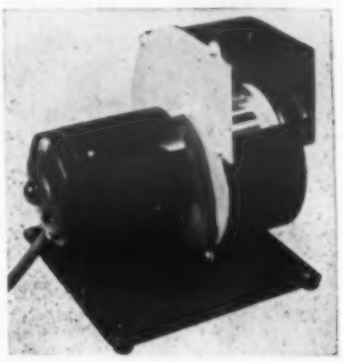
For more information write to:

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Mfg. Co.
1979 Kienlen Avenue • St. Louis 20, Missouri
764

100 Years of Successful Manufacturing Experience

For more details circle NED-165 K4 on enclosed inquiry slip

HIGH VELOCITY BLOWER
designed for intermittent service



Compact 3-lb Hi Blast blower will produce a quick blast of air at a velocity of 3340 fpm and volume of 115 cfm. Its motor uses 1 amp on 110 to 130 v ac or dc. Unit is designed for intermittent service only and has air impeller wheel of molded nylon which will withstand temperatures up to 120° F. Made by **Master Appliance Mfg. Co.**, Dept. N, Bridge & Ontario Sts., Racine, Wis.

For more details circle NED-166 K4 on enclosed inquiry slip

STAINLESS STEEL VALVES
feature chrome plated plugs

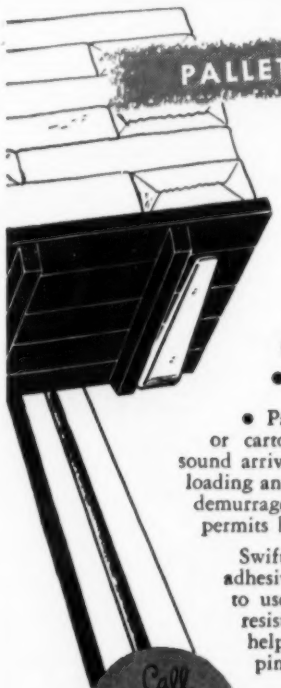
Line of Rockwell-Nordstrom stainless steel lubricated plug valves is offered for use in food, plastic, sulfite pulp and chemical plants. Chrome plated stainless steel plugs give protection against scoring, galling and effects of corrosion. Valves are offered in same sizes and types as higher priced line which is Stellite-coated. Made by **Rockwell Mfg. Co.**, Meter & Valve Div., Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

For more details circle NED-167 K4 on enclosed inquiry slip

WHITE LINE MARKER
has gravity spreader type operation

Low priced line marking machine uses any standard paint for marking lanes on plant floors, loading platforms, parking areas and storage rooms. Paint is gravity fed through a metering nozzle to the spreader, which is available in 1, 2, 3 and 4-in. widths. Paint tank is of 3-gal capacity. Machine applies paint efficiently to any firm surface, and will line close to walls, piled materials or other obstructions. A tracer for following layout lines is provided. Available from **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-168 K4 on enclosed inquiry slip



PALLETIZE WITH . . .

SWIFT'S
PALLETITE
ADHESIVES

• RESISTS HORIZONTAL SHIFTING
• POPS CLEAN ON VERTICAL PULL
• ONE GALLON DOES A CARLOAD!

• Palletizing or unit loading of bags or cartons is good insurance for safe, sound arrival of your merchandise. It speeds loading and unloading, reduces handling and demurrage costs — facilitates inventory and permits better use of warehouse space.

Swift has a versatile team of Palletizing adhesives that are ready, and economical, to use. *All* are non-skid and moisture resistant; one of them probably can help you save *real* money in your shipping department.

Write for information, today!

Call Swift for ADHESIVES

SWIFT & COMPANY
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Another of Swift's Products for Industry

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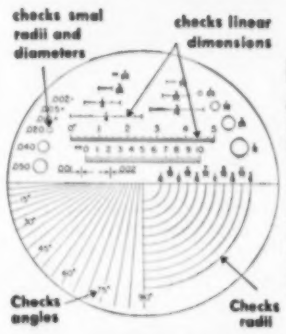
THE Original BELL & HOWELL Pocket Comparator



Saves time and money inspecting small dimensions

● Here's *guaranteed* accuracy in checking small dimensions at a price any business can easily afford. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as chamfers, threads and small holes on production parts.

Thousands in use by America's leading precision manufacturers. It's the greatest time-saver since the micrometer!

price only $36.00 order today

a product of BELL & HOWELL CO. distributed ONLY by

See Your National Tool Co. Representative or Local Jobber

NATIONAL TOOL CO.

Write for FREE descriptive folder

11210 Madison Avenue Cleveland 2, Ohio

For more details circle NED-170 K4 on enclosed inquiry slip

Only one Yale Gas Truck . . .

but as many handling jobs as your operation requires

9:30 AM

11:15 AM

1:30 PM

3:45 PM

Versatile is the word for time-and-money-saving YALE Gas Trucks. Yes, one YALE gas truck . . . with interchangeable attachments . . . can perform a variety of handling jobs daily . . . do it faster—safer—at less cost.

Yale Electric Trucks do everything the Gas Trucks do . . . can be fitted with all YALE attachments . . . are efficient, economical and trouble-free. Capacities to 100,000 lbs. And before you buy *any* electric truck, look into the big news about YALE's new Safety Silhouette Electric Truck—with exclusive safety features you've never seen before!

*Reg. U. S. Pat. Off.

YALE*

INDUSTRIAL LIFT TRUCKS AND HOISTS

Write for further information to The Yale & Towne Manufacturing Company, Philadelphia 15, Penna., Dept. 3710

Gas, Electric, Diesel & LP-Gas Industrial Trucks
Worksavers • Hand Trucks • Hand & Electric Hoists • Pul-Lifts

For more details circle NED-171 K4 on enclosed inquiry slip

"ELL"-OH!!

Eliminate cumbersome expensive threading and fabrication of pipe assemblies with "ELLS". It is now possible to bend 1" pipe and have only 1" of tangent on one end. The ell shown is 1" pipe, bent to a 2½" radius. Production machines with automatic duplicate bending relays are available up to and including 6" extra heavy pipe. The machine shown is the model "A-6" which has a bending capacity of 2" extra heavy pipe. Smaller and larger machines are available. The same machine can be used for bending tubes, structural shapes, reinforcing bars, etc., by merely changing the die.

Write for Descriptive Folder. Dept. 6

Prices start as low as $1575.00

(Motor and all Electrical Equipment included)

PEDRICK TOOL & MACHINE CO.
3640 N. Lawrence St. Philadelphia 40, Pa.

For more details circle NED-172 K4 on enclosed inquiry slip

ACCO Quality

Wright Hoists

WRIGHT SAFEWAYS

Right for your rigging and maintenance work

A rigger's hoist made in fourteen capacities ranging from ½-ton to 25 tons. They are fully enclosed, light in weight, compact and rugged. Built to stand wear and abuse because all load-supporting parts are made of steel. Machine-cut, heat-treated alloy steel gears plus ball-and-roller bearings insure long life. Smooth, positive-holding brake.

For further details see your WRIGHT distributor or write our York, Pa., office for Bulletin DH-164-B.

ACCO Wright Hoist Division
AMERICAN CHAIN & CABLE
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

for Better Values

For more details circle NED-173 K4 on enclosed inquiry slip

TUMBLE GRAV-I-FLO FINISH ... tumbling machines take

31% to 80%

more workload in the same floor space

Cutting Materials Shorten Cycle by 15% to 25%!

Grav-i-Flo equipment and supplies save substantially on mechanical deburring and finishing of metal parts, as well as produce a superior finish.

Complete Source: Machines in 5 sizes; natural and synthetic deburring and finishing chips and compounds; accessories for production tumbling.

SEND FOR CATALOG showing complete line of Grav-i-Flo equipment, accessories and supplies.

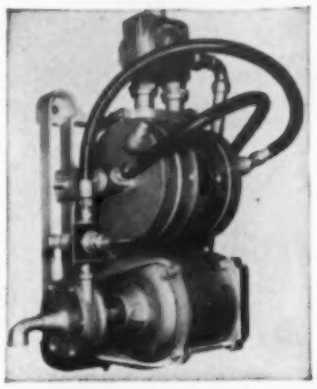
GRAV-I-FLO CORP., Dept. NED10 Sturgis, Mich.

☐ Please send complete catalog. ☐ Have Sales Engineer call. ☐ We are sending samples.

Company_____
Name_____ Position_____
City_____ State_____

For more details circle NED-174 K4 on enclosed inquiry slip

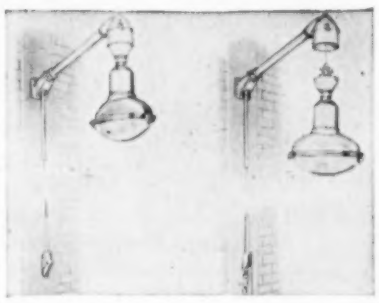
SPRAY PAINT HEATER
controlled pressure and temperature



Coil-less heat exchanger combined with electric centrifugal pump comprise the Circaflo 600 hot spray heater which will handle all types of industrial finishes, regardless of abrasive content. Unit circulates and heats paint, maintaining it at constant fluid pressure and uniform temperature at spray gun. Rapid solvent evaporation at gun head is produced, permitting deposit of high-solids film on work. Air pressure variations will not affect fluid pressure. Installation is simple, and full heat is reached in 4 minutes. Heater is available as fixed or mobile unit for booth installation or plant maintenance. Made by **Spee-Flo Co.,** Dept. NED, 720 Polk Ave., Houston, Texas.

For more details circle NED-175 K4 on enclosed inquiry slip

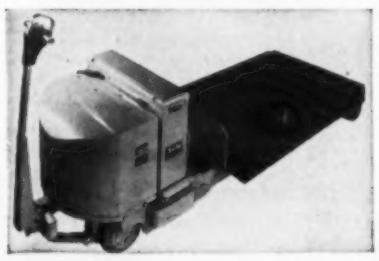
LUMINAIRE BRACKETS
disconnect and lower fixture



Safe, efficient luminaire servicing is facilitated with Servisafe wall and wood pole brackets which incorporate the Thompson disconnecting and lowering hanger mechanism. Supplied in complete packages ready for wiring and erecting, bracket units can be used with standard pendant and flood type luminaires. Mast arms range from 2 to 12 ft long in 2-ft increments. Because live contacts remain in fixed-position upper member, lowered luminaire is "dead" and presents no electrical hazards. Made by **Thompson Electric Co.,** 1138 Power Ave., Cleveland 14, O.

For more details circle NED-176 K4 on enclosed inquiry slip

MOTORIZED LIFT TRUCK
four-wheel drive, has 7-ton capacity

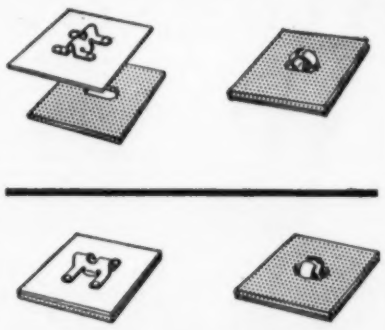


Motorized hand lift truck is designed for handling heavy machinery and other loads. It has a 3-in. lift with capacity up to 7 tons. Power packs are used at each axle to provide good weight distribution with four-wheel drive. Auto steering links and standard handle controls are provided, with two speeds forward and reverse. Top speed is 200 fpm loaded. Pushbutton control provides for dynamic braking with handle in any position. Hydroelectric truck is available with platform lengths varying between 48 and 120 in. for a minimum width of 36 in. Overload warning signals are optional. Made by **Lift Trucks, Inc.,** 2427 Spring Grove Ave., Cincinnati 14, O.

For more details circle NED-177 K4 on enclosed inquiry slip

BLIND FASTENER
joins panels with quarter turn

One-piece Q-4 rapid fastener will resist severe and prolonged vibration. Low in cost, it is suitable for automotive, appliance and other industries. Blind type fastener is snapped into place in the outer sheet or panel. Then, as in illustration, the two panels are pushed together and the fastener given a one-quarter turn to lock. Fastener is self-retaining in outer panel and accommodates commercial sheet metal tolerances. Made by **Illinois Tool Works,** Shakeproof Div., 2503 N. Keeler Ave., Chicago 39, Ill.



For more details circle NED-178 K4 on enclosed inquiry slip

AMP **SOLISTRAND TERMINALS**

NOW UP TO 600,000 CIRCULAR MILS!

AMP "SOLISTRAND" terminals, strongest and best of all non-insulated solderless connectors, are now available in wire ranges up to 600,000 circular mils! Wire is formed into one homogeneous mass by a deep pressure crimp. Use on either solid, stranded, or irregular shaped wires or combinations of each. Crimp with AMP's light weight hand hydraulic tool or AMP's new DYNA-CRIMP pneumatic-hydraulic power tool.

SEND FOR FREE CIRCULAR MIL AREA CHART—

AMP Trade-Mark Reg. U. S. Pat. Off. ©1954 AMP

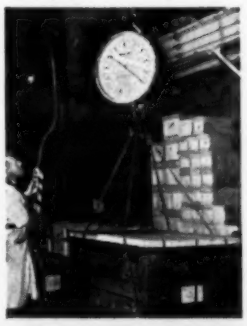
AIRCRAFT-MARINE PRODUCTS, INC.
POWER TERMINAL DIVISION
2100 Paxton Street, Harrisburg, Penna.

For more details circle NED-179 K4 on enclosed inquiry slip

You'll never regret putting me to work in your plant

®

I'm Hydroscale—I'll go to work at a price you can well afford—Guard you against losses—Watch weights on the dock, in production and processing—Help you make money as well as save it! My buddies are on the job from coast to coast eliminating the expense and inconvenience of ordinary weighing stations, making weighing practical and convenient—a part of your handling operation.



HYDROSCALE ®

Over 60 standard models
500 to 200,000 lbs.
Pound-Kilogram models,
Batching models, etc.

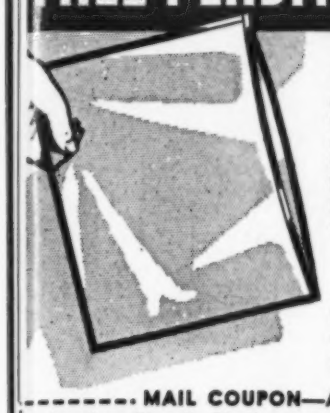
HYDROWAY SCALES, INC.
20624 WEST 8 MILE ROAD · P.O. Box 4754 · DETROIT 19, MICH.

For more details circle NED-180 K4 on enclosed inquiry slip

WANTED

5,000 MORE PLANT MANAGERS TO ASK FOR

FREE PLASTIC ENVELOPE



TO PROTECT JOB-TICKETS

Ask for *FREE* transparent envelope that keeps your work records safe, clean, and readable. Don't gamble with dirty fingerprints that hold up production. And don't let a grease spot raise havoc with your instructions.

SEND NO MONEY

50 sample work-sheet envelopes handed to your operators will convince you better than one sample.

MAIL COUPON—AND SAVE 30%

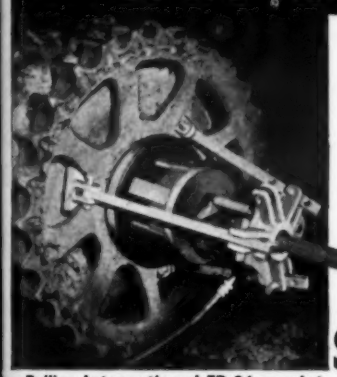
American Kleer-Vu Plastics, Inc.
53-06 Grand Avenue, Maspeth 78, N. Y.

Please send us 50 Kleer-Vu acetate envelopes, 10" x 12½", .005 gauge, with sewn edges, to protect factory tickets from smudging and tearing . . . If 100% satisfied, we will honor your invoice for only $9 (regular price $13). If not, we will return envelopes at your expense.

NAME .....
COMPANY .....
ADDRESS .....

▲ For more details circle **NED-181 K4** on enclosed inquiry slip ▲

PULL SPROCKETS IN MINUTES



Pulling International TD-24 sprocket with OTC 50 Ton Set.

WITH THE NEW OTC SPROCKET PULLER

OTC 50 TON Hydraulic Ram with Adaptors pulls or installs on the job or in the shop.

SAVE TIME, LABOR... REDUCE "DOWN-TIME"

OTC 50 Ton POWER-TWIN Hydraulic Ram . . . used for hundreds of tough jobs including the above.

Now the costly job of pulling Crawler-Tractor sprockets can be done in minutes by one man. Manufacturers approved sets are available for, Caterpillar, Allis-Chalmers and International Harvester . . . or a Universal Set to fit all three. If you have a 50 Ton OTC Ram, you need only the adaptors . . . three types of pumps available.

SEND FOR FREE FOLDER

OWATONNA TOOL COMPANY
436 Cedar Street • Owatonna, Minnesota

▲ For more details circle **NED-182 K4** on enclosed inquiry slip ▲

AGASTAT

Compact . . . Dust-Proof

TIME DELAY RELAYS

solenoid actuated—pneumatically timed

Introduces time delays into a-c or d-c circuits. Easily adjusted to provide delays ranging from 0.1 second to five or more minutes.

The AGASTAT is small, light, and operates in any position. Dust-proof timing chamber assures long operating life with a minimum of maintenance.

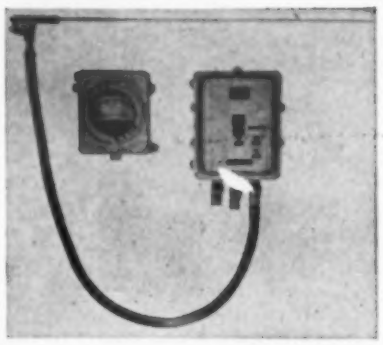
Write for Bulletin. Dept. A1-105

AGA

Division of Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth 3, New Jersey

▲ For more details circle **NED-183 K4** on enclosed inquiry slip ▲

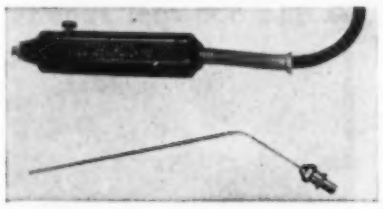
ELECTRONIC LEVEL INDICATORS have explosionproof cases



Designed for installation in hazardous areas, explosionproof Telstor electronic level indicators are available in several combinations to meet differing industrial and laboratory requirements. They measure mass or level of liquids, viscous fluids, powders or granular solids whether they are conducting or nonconducting. Indicators meet requirements of Classes I and II of Article 500 of the National Electrical Code. Made by **Robertshaw-Fulton Controls Co.**, Fielden Instrument Div., 2902 N. Fourth St., Philadelphia 33, Pa.

▲ For more details circle **NED-184 K4** on enclosed inquiry slip ▲

INSPECTION LIGHT extension fits tiny openings



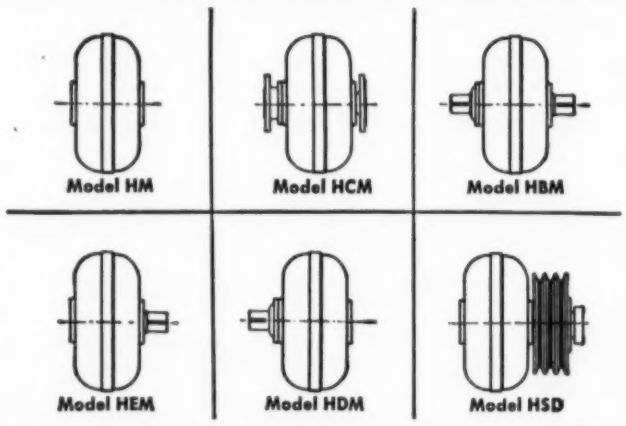
Grain-of-wheat size bulb used in the Eder-Lite extension has only ⅛-in. diameter and extension shaft stem measures 3/32-in., allowing free movement in a ⅛-in. opening. A current reducer built in the extension allows use with a standard Eder-Lite transformer. Other flexible or rigid extensions from 1 to 36 in. long fit this unit. Made by **Eder Instrument Co.**, Dept. 38, 2293 N. Clybourn, Chicago 14, Ill.

▲ For more details circle **NED-185 K4** on enclosed inquiry slip ▲

DIAL THERMOMETER is externally calibrated

Stainless steel case with clear plastic face covering and gasket sealed to stainless steel back plate are features of improved No. 35-S dial thermometer with 3½-in. dial face. Dial case can be rotated to any readable position. Actuation is by a direct-drive bourdon coil, stem is ½-in. diameter and standard lengths are 4, 6, 8 and 12 in. Separable sockets, union connections and flanged union are incorporated. Made by **Palmer Thermometers, Inc.**, 2523 Norwood Ave., Cincinnati 12, O.

▲ For more details circle **NED-186 K4** on enclosed inquiry slip ▲



Which Fluid Drive?

. . . *depends on your particular job.* They're *all* Twin Disc Fluid Couplings, and they *all* reduce your maintenance and downtime costs by *preventing* motor burnouts and engine lugging. They *all* cushion out shock loads, overloads, and vibrations. They also *improve* load distribution on compounded drives, and transmit *full* input torque at *all* times. For details on installations from ¾ to 850 hp, with any type hook-up, *write for Bulletin 144-D.*

TWIN DISC CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

▲ For more details circle **NED-187 K4** on enclosed inquiry slip ▲

Lightweight HELIARC TORCH

is water-cooled...

FOR EFFICIENT INERT GAS WELDING AT LOW COST

You can make high quality welds every time with this lightweight, 300 amp. HELIARC HW-10 torch. Both the torch body and power cable have all-internal water-cooling for cooler operation even when welding continuously at full capacity. Yet cleaning is easy for all water passages are straight. Electrode adjustment is quick and simple, too. No wrenches needed. And electrode stub loss is minimized by an improved water-cooling system. Call your nearest LINDE representative today for more details on the HELIARC HW-10 torch.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The terms "Heliarc" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

▲ For more details circle **NED-188 K4** on enclosed inquiry slip ▲

Next Time

Job-Fit Industrial Tires by Size · Tread · Compound

For tops in traction, get Goodyear's even-wearing All-Weather Tread Industrial Solid, shown above.

All-Weather Tread

Smooth Solid

All-Service Tread Xtra Cushion

Rib All-Weather Pneumatic

Semi-Pneumatic Cushion

HERE's how to cure the headaches that come from using the wrong industrial tires. Call your Goodyear Dealer and let him specify the "right tire for the right job." Let him show you how to get top performance from your industrial tires by job-fitting them these three ways:

Right Size for your equipment. Goodyear has over 100 different solid tire types and sizes plus a full line of pneumatic and semi-pneumatic tires — America's most complete line of industrials.

Right Tread for your plant's floor surfaces. Smooth and Grooved for easy rolling. All-Service or the famous All-Weather, wherever traction is needed.

Right Compound for longer tire life. Goodyear offers you a choice of either UNiversal chip-resistant or Neoprene oil- and acid-resistant compound at no extra cost.

Make the first step towards industrial tire savings in your plant by calling your Goodyear Dealer today. Or write:
Goodyear, Industrial Tire Sales,
Akron 16, Ohio

USE THE RIGHT TIRE FOR THE RIGHT JOB—USE

GOODYEAR

INDUSTRIAL TIRES

All-Service, All-Weather, Xtra Cushion—T. M.'s
The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle **NED-189 K4** on enclosed inquiry slip ▲

OUT OF AN IBM BUSINESS MACHINE POPS THIS TUBING IDEA FOR YOU

This is the contact roll of an IBM Collator—which performs electronic sleight-of-hand with 240 punched cards per minute! Steel fingers that sort the cards give the roll a high-speed workout. And it must resist corrosion and be a good electrical conductor. IBM employs Superior WELDRAWN* Beryllium Copper and low carbon steel composite tubing for the roll because it meets tight specifications for wear resistance, peak hardness and conductivity. Chances are this tubing—or one of our more than 55 other analyses—will meet *your* requirements for equally critical applications. Send for free Technical Bulletin #7-2 and tell us about your tubing needs.

*Reg. U.S. Pat. Off.

All analyses .010" to ⅝" O.D.
Certain analyses in light walls up to 2½" O.D.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

Superior Tube
THE BIG NAME IN SMALL TUBING

For more details circle NED-190 K4 on enclosed inquiry slip

Easiest to handle... Safest to use!

In the stock room, store room, filing room or office, the clean-lined Type 700 ALCO-LITE Step Ladder provides safe, easy ascent and descent with its six-inch, non-slip steps. Sturdy extruded alloy aluminum construction, yet weighing only 11 lbs. Rubber feet prevent slipping, marring polished floors.

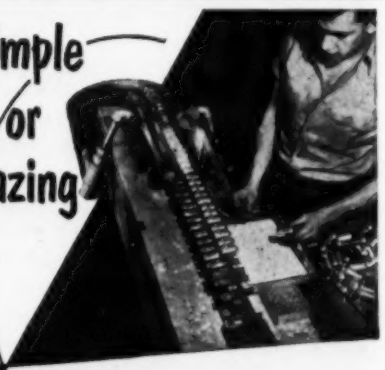
Write for specifications for this and other short step ladders.

MEMBER: METAL LADDERS ASSOCIATION

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY
346 CARBIS STREET • WORTHINGTON, PENNA.

For more details circle NED-191 K4 on enclosed inquiry slip

Amazingly simple EASY-FLO or SIL-FOS brazing pays big dividends



You can get better metal parts at lower cost—by designing them for EASY-FLO or SIL-FOS brazed construction—and using a production set-up that makes the brazing so easy—anybody can do it!

FOR EXAMPLE—A radiator valve made of a simple drawn body and a screw machine part, brazed with EASY-FLO. Operator merely places bodies in angle iron carriers on endless chain, dips spuds with preplaced EASY-FLO rings in Handy Flux and sets them in bodies. They're automatically brazed as they pass between city gas-air burners. Using only one row of carriers, output is 18 a minute. For full EASY-FLO and SIL-FOS low-temperature silver brazing details write for BULLETIN 20.

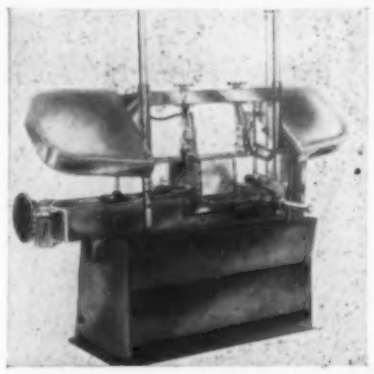
AT THE METAL SHOW Chicago-Nov. 1-5

SEE the exhibit of EASY-FLO and SIL-FOS brazed jobs from many industries. TALK with our brazing experts about your metal joining. BOOTH 342.

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.
Distributors in Principal Cities. In Canada: Handy & Harman of Canada Ltd., Toronto

For more details circle NED-192 K4 on enclosed inquiry slip

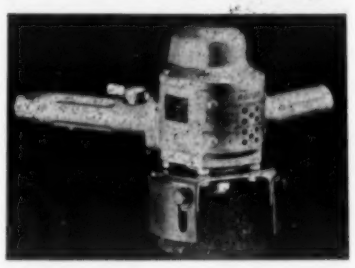
METAL CUTTING BAND SAWS equipped with variable speed drive



Rigid welded steel base and welded one-piece cutting head for rapid blade changes and easy chip removal are features of two metal cutting band saws. Model W has a capacity of 9 x 18 in., while model F has a 14 x 18-in. capacity. Variable speed drive provides blade speeds from 50 to 290 ipm, and a graduated metering valve permits choice of proper blade speed and pressure. An automatic bar feed is optional. Machines are equipped with a large capacity chip and coolant tray. Made by **W. F. Wells & Sons**, Dept. N, Three Rivers, Mich.

For more details circle NED-193 K4 on enclosed inquiry slip

VERTICAL GRINDER with 8000, 6000 and 500-rpm speeds

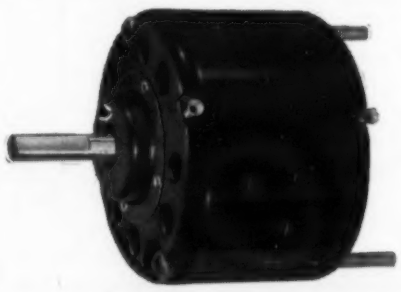


Weighing only 6¾ lb, this air-driven vertical grinder has sufficient power for 7-in. cut-off disks; 4, 5 or 6-in. cup wheels; 5, 7 or 9 in. sanding pads and wire brushes at proper speeds. Tool measures 5½ in. to top of spindle washer and has speeds of 8000, 6000 and 500 rpm. Speed is controlled by a quick-acting governor. Dead handle is removable and live handle can be installed in any of four positions. Tool operates on 80-90 psi shop air line. Made by **Rotor Tool Co.**, 26300 Lakeland Blvd., Cleveland 23, O.

For more details circle NED-194 K4 on enclosed inquiry slip

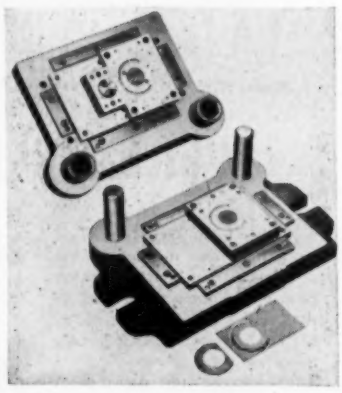
FRACTIONAL HORSEPOWER MOTOR for 115-v, 60-cycle ac operation

Model B in Smooth Power line of fractional horsepower electric motors is designed for use in household fans and other similar products. Shaded four-pole, four-coil type motor is made in ⅝, 1 and 1⅜-in. stack sizes with self-aligning, self-lubricating porous bronze bearings, baked varnish-impregnated windings and enameled stamped steel housing and end bells. Rotor is dynamically balanced. Basic model operates on 115-v, 60-cycle ac. Shaft diameter and length, stud extensions and other special features can be supplied to specification. Made by **General Industries Co.**, Dept. E, Elyria, O.



For more details circle NED-195 K4 on enclosed inquiry slip

UNIVERSAL DIE SET use reduces die storage space



Universal die set is made in such a way that a specific sized die plate fits into the die set in a predetermined position and then bolts down in perfect alignment. Plates on which die are built can be removed and stored and die set used on a different plate die. Each time the plate die is repositioned it is in correct alignment. Dies built on the plate rather than on the die set, permit unit to be stored as a less bulky unit. Standard die sets are built to receive 4 x 5-in. blank and 4 x 5-in. form; 5 x 8-in. blank and 6 x 8-in. form; and 8 x 15-in. blank and 8 x 15-in. form. Made by **Laystrom Mfg. Co.**, 1999 N. Parkside, Chicago, Ill.

For more details circle NED-196 K4 on enclosed inquiry slip

SAVE UP TO 85% ON GOVERNMENT SURPLUS

MAGNI-FOCUSER
Has fine ground lenses of optical glass. Neutralizes eye strain from close work. Binocular design gives third dimensional vision. Allows freedom of both hands. Wear over glasses. Plastic frame with adjustable headband.
SIZES: 20" focal lgth. 1½ power—14" focal lgth., 1¾ power, 10" focal lgth., 2½ power; 8" focal lgth., 3½ power ..... price each ONLY 10.50

HYDRAULIC EQUIPMENT
We stock over 100,000 Hydraulic Cylinders in 106 different types and sizes. These can be adapted wherever tremendous power is needed to push, pull, hoist, mould or drive, etc.

SPECIAL
Gives 20,000 lb. thrust using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on a low pressure air system. Has 4" bore; 18" stroke; 30½" long. Ideal for shop. Part No. 39 USED 29.95 NEW 43.95

OTC TOOLS
See our complete line. Pullers for Gears, Bearings, Wheels, Pulleys, Bushings, Shafts, etc.

NEW 10 TON HYDRAULIC PRESS
Use this Press in the Shop or take it with you on the job. Frame is 4" welded channel iron. Has 4¼" stroke, 2½" diam. ram. Valve operates piston in both directions. Adjustable platform. Positive power Hand Pump with handle. 2000 PSI pressure gauge. SIZE: 60" high 27" wide 29" base 129.00

HYDRAULIC HAND PUMP
Operating pressure 1500 PSI. Cap., 1.5 cu. in per complete cycle ... 12.75

HYDRAULIC ACCUMULATORS
A-2B FLOATING PISTON TYPE - 4" x 18" Built to stand 2,000 PSI 12.75
A-5 VICKERS - 10" dia. Ball type. Built to stand 2000 P.S.I. 24.50

NOTE: Stocks include bargains in Hydraulic Pumps — Valves — Motors — Boosters — as well as Oil, Water and Fuel Pumps, etc.

WORLD'S MOST AMAZING BARGAIN CATALOG
320 PAGE-1954 EDITION
Packed with SENSATIONAL VALUES in GOV'T SURPLUS — FACTORY CLOSE-OUTS — and GENERAL MERCHANDISE. Fully priced and illustrated. Thousands of items in Machine and Industrial Tools — Hydraulic Equipment such as Cylinders, Pumps, Valves, Motors, Fittings, etc. Bargains in Electric Motors, Generators, Blowers, Parts, etc. Also Hand and Power tools, Precision Instruments, Bearings, Hose Clamps, Winches, Foam Rubber, Microscopes, etc. ALL AT PALLEY BARGAIN PRICES — PRICED TO SELL!

Pay by M.O. or check. P.O.'s accptd. from D&B firms. ½ deposit with C.O.D.'s. Prices FOB Los Angeles.

Palley SUPPLY CO. 2263 E. VERNON AVE., DEPT. NED-10 LOS ANGELES 58, CALIF.

For more details circle NED-197 K4 on enclosed inquiry slip

need volume production?

get it here—in ***plastics*** *molded by General American*

Manufacturers who never dreamed of using plastics for parts or products are getting results they've always wanted at General American's huge plants!

Big Volume Production—fast, at low cost, with color, fine finish and difficult designs *molded in*. These products are molded on batteries of injection presses ranging up to 300 ounces, compression presses up to 2,000 tons, and a variety of sizes of reinforced plastics presses.

New Sales Appeal, New Products, New Ideas can take shape when General American's start-to-finish facilities join your team. Experienced men with equipment unmatched anywhere will work with you on every phase of production.

Talk over your requirements and ideas with a General American engineer.

GENERAL AMERICAN Plastics Division

GENERAL AMERICAN TRANSPORTATION CORPORATION
135 South La Salle Street • Chicago 90, Illinois

For more details circle NED-198 K4 on enclosed inquiry slip

POLYPENCO® NYLON SHAPES

MAKE LASTING REPAIRS with nylon parts machined in your shop

- Nylon gears, bearings, rollers and other wear parts often last longer than metal parts . . . require little or no lubrication . . . run quietly.
- Make one part or hundreds economically on standard metalworking tools.
- Easy machining . . . no special operator skills.
- Immediate warehouse delivery of most type sizes.
- Uniform high quality . . . technical help.

WRITE FOR INFORMATION ON NYLON SHAPES

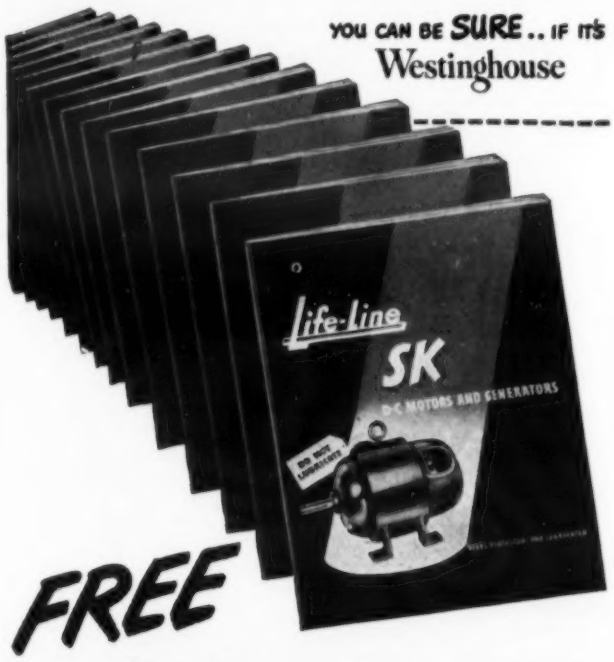
The POLYMER CORPORATION of Penna. • Reading, Penna.
In Canada: Polypenco, Inc., 2052 St. Catherine W., Montreal, P.Q.

POLYPENCO® NYLON
... teflon* and other non-metallics

Stocks: Reading • Chicago • Los Angeles • Newton (Mass.) • Branford (Conn.)
*trademark for DuPont tetrafluoroethylene resin

▲ For more details circle NED-199 K4 on enclosed inquiry slip ▲

YOU CAN BE SURE.. IF IT'S Westinghouse



FREE to D-C motor users

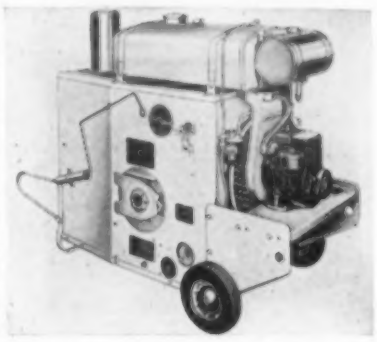
HERE ARE TWENTY PAGES OF FACTS ON THE LIFE-LINE SK D-C MOTOR. THIS BOOK SHOWS WHY AND HOW NEW DEPENDABILITY HAS BEEN ADDED TO THE WELL-KNOWN SK . . . INCLUDES INFORMATION ON CONSTRUCTION, MOUNTING, TYPES OF ENCLOSURES, PERMISSIBLE MOTORS.

GET YOUR COPY FREE! Simply mail a penny post card asking for a copy of Life-Line SK D-C Motor Booklet, B-4595. Address: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.
J-21567

Westinghouse
Life-Line D-C Motors

▲ For more details circle NED-200 K4 on enclosed inquiry slip ▲

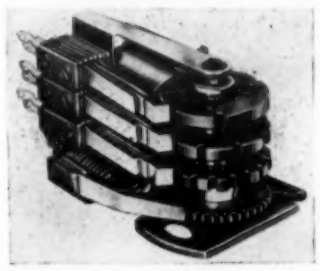
PORTABLE AIR HEATER
is oil or gasoline fired



Utility model portable air heater can be used indoors without fire danger. It has provision for venting fumes outside the work area. Oil or gasoline fired heater can be converted from electric motor to gasoline engine power or vice versa with a conversion kit. Self-contained unit produces from 75,000 to 425,000 Btu. Made by **American Air Filter Co.**, Herman Nelson Div., Dept. ND, 1824 Third Ave., Moline, Ill.

▲ For more details circle NED-201 K4 on enclosed inquiry slip ▲

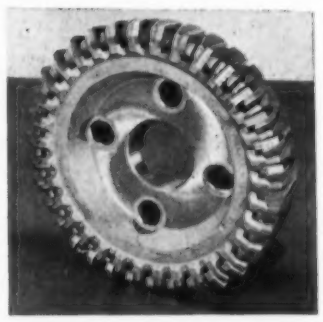
CAM-TYPE RELAY
gives relay-stepping switch action



Small, lightweight and resistant to shock, vibration and temperature changes, series OCS single cam-type rotary relay combines relay and stepping switch functions. It is adaptable for alternate on-off operations as well as for stepping operations. It can be driven self-interruptedly to produce a time cycle or for "homing". Wide range of contact arrangements and cams is offered. Available from **Automatic Electric Sales Corp.**, 1001 W. Van Buren St., Chicago 7, Ill.

▲ For more details circle NED-202 K4 on enclosed inquiry slip ▲

ROUGHING CUTTER
feeds over 100 ipm



Improved Shear Clear face mill can be used on production jobs calling for rough milling at feed rates of over 100 ipm. New blade angles, coupled with free cutting, shearing action, make possible the high feed rate. Cutting on the blade's bevel portion produces long, thin chips. Cutter has tungsten carbide tipped blades and can be used for wide range of roughing work on various metals. It is made in sizes from 2½ in. diameter up. Made by **Ingersoll Milling Machine Co.**, Dept. CC, 2410 Douglas St., Rockford, Ill.

▲ For more details circle NED-203 K4 on enclosed inquiry slip ▲

MODERN TIME AND COST SAVERS BUILT BY... Standard GRAVITY & POWER CONVEYORS

LIFT OR LOWER— FLOOR TO FLOOR WITH A

STANDARD INCLINEBELT

Move boxes, cases, cartons, sacks or bundles from basement to first floor, or any floor to floor — continuously with the Standard Inclinebelt. Compact — simple to install — minimum maintenance and attention. Lifts or lowers 10 to 20 lbs. of live load per ft.; floor elevations of 8 ft. to 14 ft. 6 inches inclusive; two belt widths to handle commodities 15½ inches to 25½ inches wide. Electric motor operated. Write for INCLINEBELT Bulletin — address Dept. NED-104.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

▲ For more details circle NED-204 K4 on enclosed inquiry slip ▲

BRUNT FAULTFINDERS reduce hours to minutes in locating accidental grounds

No other instrument or method compares with the *BRUNT FAULTFINDER* for speed, accuracy and simplicity in locating grounds in normally ungrounded power circuits. Chief electricians of the country's largest plants use it and have praised its effectiveness highly. Easily operated by one man . . . small, compact, light . . . combination ground detector and fault locator . . . imposes only 2 amperes on circuit . . . can be used in dark or noisy locations . . . no pulling of switches or interference with production . . . effective on ungrounded wiring systems up to 550 volts a.c. or d.c. . . . traces pole line signals without climbing . . . no delicate meters or instruments to adjust. Price from $400. Send order today or write for new descriptive booklet.

PARR MANUFACTURING CORP.
40 Austin Street Newark 5, N. J.

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NOW! process photocopies up to 27" wide with this new TRANSCOPY unit

Here, at last, is a simple, convenient way to get positive prints of large-sized copy. This new Remington Rand Transcopy prints from negatives up to 27" in width, of any length. Used with a Vacuum Seal Portagraph, the 27" throat Transcopy will quickly give you clear, sharp, easily read copies of engineering drawings, blueprints, charts or bound books. For more information about the unbelievable savings which Transcopy and Portagraph can bring you, write to Room 2039, 315 Fourth Ave., New York 10.

Remington Rand INC

▲ For more details circle NED-206 K4 on enclosed inquiry slip ▲

To Identify Stainless Steels

send for your Chart Today!

To more easily identify stainless steels that may have become mixed in stock—or stainless scrap—use Carpenter's new chart for segregating stainless steels. It diagrams and explains how and when to use each of 11 tests. Typical reactions are given for the nitric acid, magnet, spark, hardness, muriatic acid, sulphur spot, nickel spot, and stabilization tests. Return the coupon below for your copy now.

THE CARPENTER STEEL COMPANY
118 W. Bern St. • Reading, Pa.

Gentlemen: Without obligation, please send me your new chart for identifying Stainless Steels.

NAME_____ TITLE_____
(Please Print)
FIRM_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

▲ For more details circle NED-207 K4 on enclosed inquiry slip ▲

IRVINGTON STOCKS OVER 20 POLYESTER FILM LAMINATED INSULATIONS

Yes, over 20 combinations of polyester film laminated with kraft or rag . . . woven glass or asbestos . . . in duplex and triplex constructions . . . for immediate delivery. *Irvington* is in production on many varieties, with hundreds of others already tested and proved.

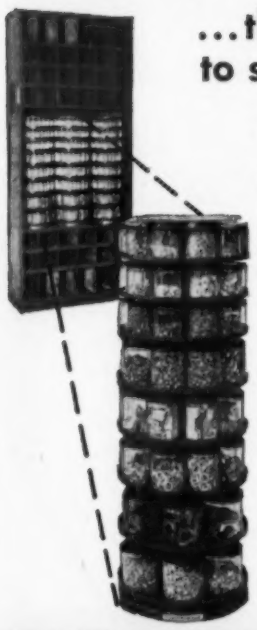
And, thanks to special Irvington adhesives, every one of them is safe from the delaminating effects of heat and solvents.

Write today for technical data and samples.

IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
14 ARGYLE TERRACE, IRVINGTON 11, N. J.
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle NED-208 K4 on enclosed inquiry slip ▲

VU-O-MATIC!



...the modern answer to small parts storage

COMPACTNESS . . . visibility . . . protection. That's the outstanding combination offered by Union Metal VU-O-MATIC rotary stands. Two to four times more small parts can be stored with this jar-tray development than in ordinary bins or drawers.

Jars mean quicker, faster visual location. No more wasted time searching through drawer after drawer. Parts stay clean and moisture-free indefinitely, eliminating pre-use cleaning. Freedom from corrosion is maintained for long periods of storage.

Folder MH-810 offers additional informative data on specifications, combinations, simplifying stock control and weight-count inventory. Write today to The Union Metal Manufacturing Co., Canton 5, Ohio, for your copy.

UNION METAL
Material Handling Equipment

▲ For more details circle NED-209 K4 on enclosed inquiry slip ▲

Many Things Copper Does ALCUPLATE® Does At Less Cost

ALCUPLATE FEATURES
- Natural copper appearance
- High electrical conductivity
- Excellent heat dissipation
- Soft-soldering surfaces
- Easy fabrication
- Light weight

Q *How can you reduce the cost of copper or brass in your parts or products?*

A *Get the same copper surface area and natural thickness with less copper.*

And that is *exactly* what ALCUPLATE does. ALCUPLATE is a solid layer of copper permanently clad — to one or both sides of less expensive aluminum. This gives you solid copper performance at a 15 to 30% lower cost over solid copper.

Yet, in addition to this cost reduction, ALCUPLATE provides virtually the same physical and electrical properties as solid copper.

FABRICATING PROPERTIES—ALCUPLATE can be fabricated by stamping, drawing, spinning and forming. The copper provides an ideal surface for soft-soldering operations, electroplating or other finishes.

SIZES AVAILABLE—ALCUPLATE is available in coils or cut lengths up to 1/16" thick x 13" wide and in a choice of thickness ratios and tempers.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
810 FOREST STREET, ATTLEBORO, MASS.

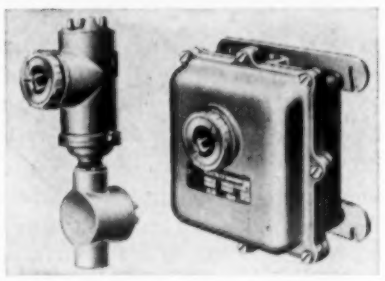
▲ For more details circle NED-210 K4 on enclosed inquiry slip ▲

ELECTRONIC TIMER for various timing functions

Interval, delay, repeat cycling, programming or pulsing timing functions are performed by the model T2 electronic timer. This control timer is particularly suited for use on process timing and sequence control of automated equipment, induction heaters, machine tools, molding machines and packaging and filling machinery. Accuracy within 1 per cent is maintained over line voltage variations of 90 to 135 v. Time ranges of 0.1-1, 1-10 and 10-100 seconds, direct-reading time dial and two single-pole, double-throw load contacts with 8-amp rating are featured. Made by **Ferrara, Inc.**, Dept. B-6, 8106 W. Nine Mile Rd., Oak Park 37, Mich.

▲ For more details circle NED-211 K4 on enclosed inquiry slip ▲

PHOTOELECTRIC CONTROLS explosionproof for hazardous areas



Wide variety of electrical or electronic devices can be controlled in hazardous industrial or transportation areas by explosionproof Condulet photoelectric controls. Light source transmitter is a type EPL 243 Condulet and light detection is by a type EPA 342 Condulet, a light-sensitive electronic control relay. Absence of light as detected through a lens of the receiver's photoelectric tube opens a relay or closes an electrical circuit. Lens focal limits are from infinity to a point 6 in. from lens. System is classified by Underwriters' Laboratories for use in Class I, Group D hazardous locations. Made by **Crouse-Hinds Co.**, 7 North St., Syracuse, N. Y.

▲ For more details circle NED-212 K4 on enclosed inquiry slip ▲

TELEPHONE MOUTHPIECE WIPERS are germicidal, yet harmless

Telephone mouthpieces can be sanitized and deodorized in few seconds by wiping them with tel-O-cide disposable cloth wafers. Pads are impregnated with an active germicide harmless to humans. Moisture from pad dries almost instantly on mouthpiece and receiver, requiring no additional wiping. Pads are packed in jars of one hundred, priced at $1.39. Distributed by **General Scientific Equipment Co.**, 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle NED-213 K4 on enclosed inquiry slip ▲

FLOW REGULATOR features automatic by-pass

Constant rate of flow can be maintained by model 1801 flow regulator, regardless of variation in pressure or back pressure, while simultaneously by-passing excess pump output at working pressure. Unit is designed for use in power steering systems, fluid motors or any hydraulic system where constant flow is required in presence of varying pump output. Operating pressure rating is 3000 psi. Regulator is made in ⅜ and ½-in. sizes with minimum and maximum controlled flows of 0.3-6.0 and 1.0-12.0 gpm, respectively, and minimum and maximum by-pass flows of 0-12 and 0-20 gpm, respectively. Made by **Waterman Engineering Co.**, Dept. NED, 725 Custer Ave., Evanston, Ill.

▲ For more details circle NED-214 K4 on enclosed inquiry slip ▲

Hasn't lost a nut since he used KROIL

"After trying for several months to find some kind of oil to loosen some nuts on our Heat Treat Trolleys, we finally tried Kroil and found it worked excellently.

"Before trying Kroil we broke off every nut. Since then, we have not lost one and decreased the repairing time from thirty minutes to about six minutes per trolley."

KROIL is the amazing new chemical tool that comes to the rescue when production is threatened by some frozen nut, bolt, bushing or bearing. It creeps into millionth inch spaces, dissolves rust and dried grease and supplies lubrication to loosen the part. 12,800 industrial concerns are already depending upon Kroil in emergencies. If you are not one of them, accept this offer.

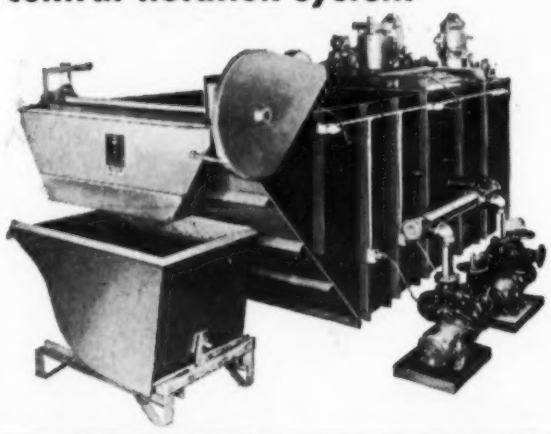
You too can get these results. Try KROIL on money-back basis.
Gallon, $3.85; with Kroiler squirt gun, $4.95, f. o. b. factory.

Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 S. Thompson Lane, Nashville 11, Tennessee

▲ For more details circle NED-215 K4 on enclosed inquiry slip ▲

THOUSANDS SAVED in oil coolants, grinding wheels, manhours with a HOFFMAN central flotation system



Outstanding results at
INTERNATIONAL HARVESTER COMPANY, CHICAGO, ILL.
$71,942.61 saved in first year of installation.
47.4% reduction in grinding wheel cost.
134% increased production per grinding wheel.

At GENERAL RAILWAY SIGNAL COMPANY, ROCHESTER, N. Y.
$3800 savings in labor costs through elimination of grinder sump tank cleaning.
50% increase in grinding wheel life.
Substantial coolant savings.

HOFFMAN Flotation Units employ the only fully automatic method for effective, continuous removal of insoluble waste matter from soluble oil and water coolants in wet grinding operations. They require no attention . . . use no filter aids, screens or bags.

HOFFMAN coolant clarification does not rely on gravity alone. Heavier solids settle to the bottom but light minute particles are aerated out of the coolant and skimmed off into the dirty coolant compartment . . . sludge is discharged in near-dry state for easy removal.

Downtime and labor for cleaning sumps are eliminated. The exceptional clarity of the coolant increases the output of your grinders and maintains uniform quality. Wheel surfaces are kept in optimum grinding condition longer . . . need fewer redressings.

HOFFMAN standard flotation units are available in sizes ranging from 20 to 1500 GPM. Larger systems are designed to meet flow rate requirements and plant conditions. Where a central system is not feasible, smaller units for individual machine tool application are recommended.

Let a HOFFMAN Industrial Filtration Engineer survey your plant and suggest the filtration unit best suited for your needs.

Write for full information on the design and operation of the HOFFMAN Flotation Units. We'll be glad to send you also reports from industrial users of these systems.

INDUSTRIAL FILTRATION DIVISION
U. S. HOFFMAN MACHINERY CORPORATION
DEPT. N.E.D. • 105 FOURTH AVENUE • NEW YORK 3, N. Y.

▲ For more details circle NED-216 K4 on enclosed inquiry slip ▲

ALLIS-CHALMERS
Induction HEATER

Anneals 7000/hr

Allis-Chalmers 20-kw Induction Heater shown with A-C designed and built work handling fixture.

IN PRE-PRODUCTION tests, this Allis-Chalmers Induction Heater annealed steel shell cases at the amazing rate of nearly 2 per second. Not only is this heating unit a fast worker, but it's a clean worker — and a cool one, too! It puts the heat into the metal where it belongs — holds down the ambient.

Whether your problem is annealing, hardening, brazing, or soldering, find out what an Allis-Chalmers Induction Heater can do for you. Standard ratings to 100 kw output are available. Call your nearby Allis-Chalmers office or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-4405

ALLIS-CHALMERS

For more details circle NED-217 K4 on enclosed inquiry slip

Red Arrow LIFT TRUCKS

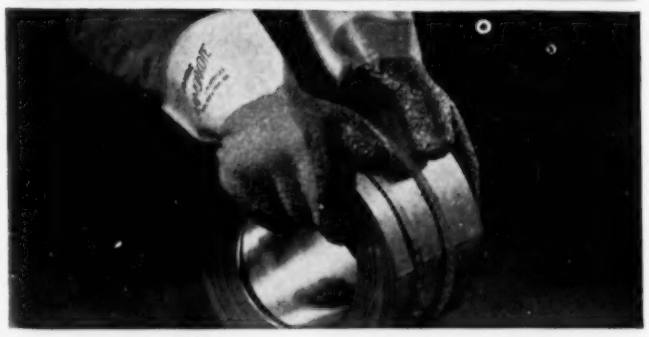
single stroke
lift truck
quick,
automatic action
easy rolling
positive safety
easy lift
easy steer

Lowest costing Lift Truck you can buy, the Red Arrow features speed, economy, and unusual ease of operation. Maintenance cost is remarkably low. Machined, standardized parts and machine-bolted frame speed and simplify occasional repairs . . . eliminate downtime. In time and manpower saved, the Red Arrow pays for itself many times a year on the job.

LIFT TRUCKS INCORPORATED
2423-31 Spring Grove Avenue • Cincinnati 14, Ohio

HYDROELECTRIC, HYDROMATIC and RED ARROW LIFT TRUCKS

For more details circle NED-218 K4 on enclosed inquiry slip



These 2 hands need a lot of protection

Give them the best . . . give them

ARMORKOTE Gloves

The roughest handling jobs in industry demand the safest hand protection. Plastic-coated ARMORKOTE Gloves—light, flexible and tough as a rhino's hide—give that kind of protection. Reports from plants using ARMORKOTE Gloves in handling oily steel, rough castings, lumber, cement blocks, barrels, bricks and scrap indicate that these heavy-duty gloves are giving better hand protection and keeping workers on the job.

You, too, can keep workers on the job, save money and increase production with ARMORKOTE—the only plastic-coated work gloves made of job-proved Jomac Cloth. Write for our complete catalog. Ask about a trial order. JOMAC, INC., Dept. G, Philadelphia 38, Pa.
formerly C. Walker Jones Co. Plants in Philadelphia, Pa., and Warsaw, Ind.

JOMAC
INDUSTRIAL GLOVES
outwear ordinary gloves by 900%

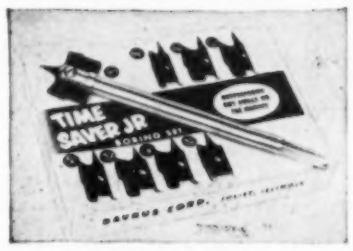
For more details circle NED-219 K4 on enclosed inquiry slip

MERCURY SWITCH
handle glows in "off" position

Tiny neon light in the handle of the GE5531-2 mercury switch glows when switch is in the "off" position. It not only makes the switch easy to locate in the dark, but acts as a reverse pilot light to indicate that a remote light is turned off. Neon light is expected to give 10 to 15 years of service at an average electricity cost of about 2 cents per year. Made by **General Electric Co.**, Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn.

For more details circle NED-220 K4 on enclosed inquiry slip

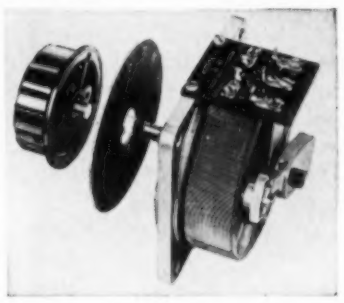
WOOD BORING BITS
for use in electric drills



Wood, plastic and composition materials can be drilled with set of eight boring bits for use in ¼-in. electric drills or drill presses. Time Saver, Jr. set includes replaceable hard tempered blue spring steel bits from 9/16 to 1 in. They are replaceable and will drill through cross or end grains or at almost any angle. Made by **Davrus Corp.**, Dept. 163, Box 1221, Joliet, Ill.

For more details circle NED-221 K4 on enclosed inquiry slip

VOLTAGE CONTROLLERS
for 350 to 1200-cycle service

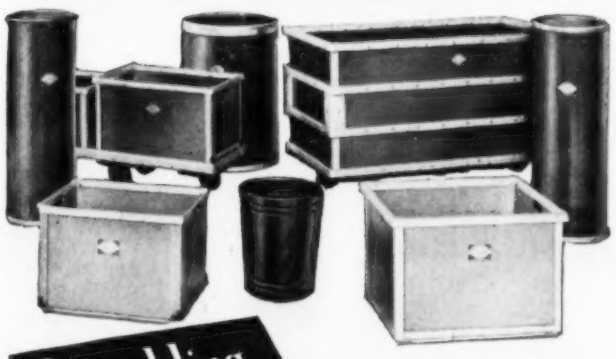


Types M2 and M-5 Variac autotransformers are voltage regulating devices rated at 2 and 5 amp respectively for 115-v, 350 to 1200-cycle input. Output range is 0-115 or 0-135 v depending on connections. For 0-115-v connection, maximum outputs are 3 and 7½ amp. Improved units withstand shock, vibration and environmental tests of MIL-T-945-A. They have modified cooling, counterbalanced radiators and concealed winding taps. Controls are readily attached to walls or bulkheads. They are suitable for two and three-gang assembly and are available also with three-phase controls. Made by **General Radio Co.**, Massachusetts Ave. & Front St., Cambridge 39, Mass.

For more details circle NED-222 K4 on enclosed inquiry slip

SEND FOR FREE CATALOG ON SPAULDING FIBRE RECEPTACLES

A complete line of tough, lightweight, shock-proof containers for storage and materials handling. Resistant to moisture, impact and abrasion. Won't splinter or corrode.



Spaulding

Boxes, barrels, trays, trucks in all sizes and weights.

SPAULDING FIBRE CO., INC., DOVER, N. H.
Please send me by return mail your catalog on Spaulding's complete line of Fibre receptacles.

Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-223 K4 on enclosed inquiry slip

DESIGN

Engineered to deliver maximum torque — with minimum size — ROCKFORD CLUTCHES provide abundant brawn, without unnecessary bulk. Spring-loaded and over-center, single or double-plate, or multiple-disc types fit compactly into product designs. If your project calls for a drive that *must* fit neatly into limited space, consult ROCKFORD clutch engineers — while your size problem still is on the drawing board.

Send for This Handy Bulletin
Shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS. Contains diagrams of unique applications. Furnishes capacity tables, dimensions and complete specifications.

B-W

ROCKFORD CLUTCH DIVISION
BORG-WARNER
312 Catherine Street, Rockford, Illinois

ROCKFORD CLUTCHES

For more details circle NED-224 K4 on enclosed inquiry slip

For Best HIGH-SPEED Performance Use . . .

GENERAL

WIDE-BASE PNEUMATICS

They save time • money • labor. Give you cost-saving advantages at all speeds.

General has pioneered every important advance in the field!

You can trust GENERAL'S complete line for the exact design for every purpose.

- More load capacity at low or high speeds
- Cushion equipment and loads reducing breakage and spillage
- Save high cost floors and floor surfaces
- Slow, even wear for long service
- High flotation for easier rolling over soft ground
- Rolls easier, smoother over all surfaces.

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 35"—200 to 7890 lbs. cap. for low or high speeds.

THE GENERAL TIRE

Rigid

CASTER FORKS

Wide-Base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

Swivel

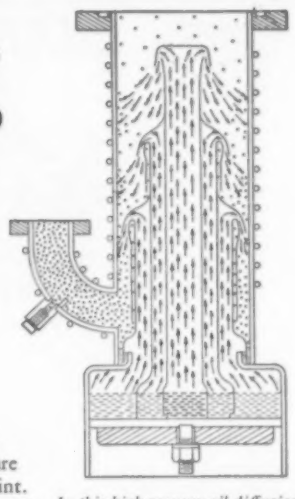
SEND FOR CATALOG DEPT. 4

The GENERAL TIRE & RUBBER CO. Akron, O.

For more details circle NED-225 K4 on enclosed inquiry slip

How to select the right

vapor pump fluid



In this high vacuum oil diffusion pump, hot vapor rises from a boiler through concentric chimneys from which it is projected through nozzles at supersonic speeds. The streams of vapor trap the gas molecules from the chamber being evacuated and propel them forward in the direction in which a forepump is drawing gas. The vapor then condenses on the cooled wall of the pump and returns to the boiler to repeat the cycle.

CVC's development of special organic liquids for *high vacuum* diffusion and oil ejector pumps contributes in a major way to the economical creation of high vacuum *without liquid gas or charcoal traps.*

The nine *CVC* pump fluids are the result of long experience in balancing the factors of vapor pressure-temperature characteristics, chemical and thermal stability, nature of breakdown products, and pour point.

We have prepared a new "Data Sheet" describing these vapor pump fluids in detail. You will find it an aid to selecting the right fluid for your high vacuum application. We will be glad to send you a copy promptly.

CVC

Consolidated Vacuum Corporation

Headquarters for High Vacuum —— ROCHESTER 3, N. Y.

sales offices: New York, N. Y. • Chicago, Ill. • Boston, Mass. • San Francisco, Calif. • Camden, N. J.

For more details circle NED-227 K4 on enclosed inquiry slip

Let the floor take the wear and tear . . . not your employees!

INSTALL—PABCO

MASTIPAVE

FLOORING

SUPER-TOUGH, NON-SLIP RESILIENT, LOW-COST!

Specified by top purchasers for factories, warehouses, schools, government jobs, and institutions . . . *specified* because Pabco MASTIPAVE is the tough, long-wearing, *safe* floor that costs little to install, so little to maintain! In rolls, 36" wide, and tiles, 9"x 9" . . . in terra cotta or black.

Only PABCO makes MASTIPAVE . . . for full information, send this coupon TODAY!

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
(Mail to Dept. D nearest office)

GENTLEMEN: Without cost or obligation to me, please send your folder, "Every Building Needs Pabco MASTIPAVE."

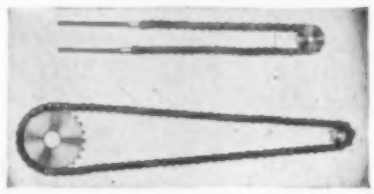
NAME_____

ADDRESS_____

CITY_____ STATE_____

For more details circle NED-228 K4 on enclosed inquiry slip

MINIATURE REMOTE CONTROL is chain and sprocket system



Motion transfer through several planes simultaneously is possible with this miniature mechanical chain and sprocket system. This stainless steel corrosionproof chain will operate accurately and smoothly around a minimum of a seven-tooth sprocket with a root diameter of ¼-in. Chain pitch is 0.147-in. and weight is 0.45-oz per ft. Standard sprockets for incorporation in drives or controls are available from stock with 7 to 45 teeth and 0.250 to 2.024-in. root diameters. Special sprockets can be supplied. Solder type fittings are used to join standard 1/16 and 3/64-in. aircraft cable to end of chain for multi-plane motion transfer over pulleys. Chain samples will be supplied by **Sierra Engineering Co.**, Dept. NED, 123 E. Montecito Ave., Sierra Madre, Calif.

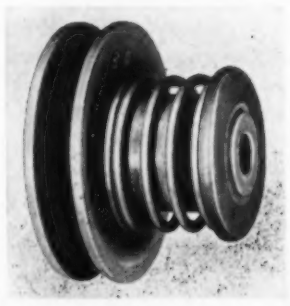
For more details circle NED-229 K4 on enclosed inquiry slip

CONNECTOR VALVE for gas, air or liquid testing

One quick operation is all that is required to connect and seal gas, air or liquid pressure lines to standard openings for testing vessels, systems or assemblies. Inserting the Connecto-Valve into opening and depressing its cam lever simultaneously expands the connecting seal and opens the valve. A leakproof seal is effected and full flow of gas, air or liquid into vessel or assembly under test is released. Withdrawal of the unit automatically closes the valve, made of corrosion resistant materials with replaceable neoprene seals. Inlet connections are for ⅜-in. pipe pressure lines. Valves are available for sealing ½, ¾ and 1-in. pipe openings. Made by **Mechanical Products Corp.**, N-168 N. Ogden Ave., Chicago 7, Ill.

For more details circle NED-230 K4 on enclosed inquiry slip

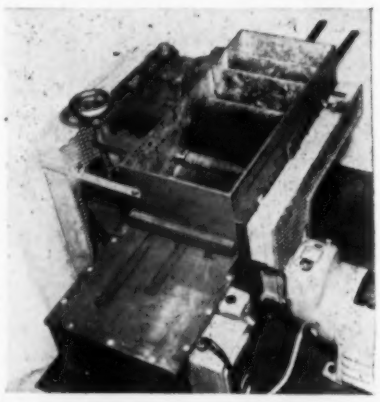
VARIABLE SPEED PULLEY rated 1/3-hp at 1750 rpm



Designed for use on office machinery, blowers and conveyors, No. 30 Var'A'Cone variable pitch pulley is small and compact. It provides infinite automatic speed variation over a 2:1 speed ratio and will transmit up to ⅓-hp at 1750 rpm. Standard A section belts are used. Machined from cast iron, pulley has maintenance-free oil-impregnated bearings. Made by **Gerbing Mfg. Corp.**, 11801 Milwaukee Ave., Northbrook, Ill.

For more details circle NED-231 K4 on enclosed inquiry slip

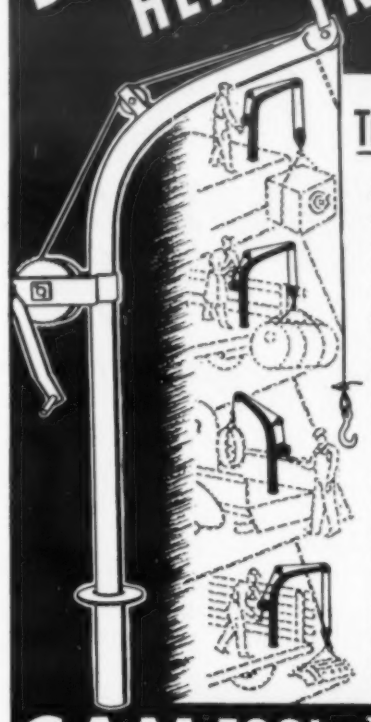
STRIP STOCK SCRUBBER removes heat treat scale and sludge



Heat treated hack saw blades or similar types of strip stock can be cleaned on one or both sides prior to painting or other operations by this industrial scrubber. Operator loads machine and cleaned blades or strip emerge into a basket or onto a conveyor. Material passes through cleaning agents where brushes remove all scale and sludge, then is dried in a steam chamber. Rate of feed through machine is 41 lineal feet per minute. Machine is powered by two 1-hp brush motors, a 1/3-hp feed roll motor and a 1/15-hp detergent slinger ring motor. Made by **Fuller Brush Co.**, Machine Div., Dept. NED, 3530 Main St., Hartford 2, Conn.

For more details circle NED-232 K4 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

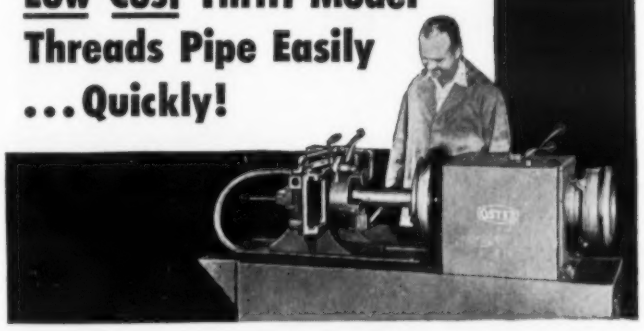
CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

For more details circle NED-233 K4 on enclosed inquiry slip

OSTER

Low Cost Thrift Model Threads Pipe Easily . . . Quickly!



Catalog No. 784

Here's the threading machine that's designed for tough jobs and small budgets. The No. 784 Oster "Thrift Model" has two quick-opening, lever-operated die heads to cover the entire pipe range of 1" to 4"; extra range, ½" and ¾"; and bolt range of ¾" to 3". Fully adjustable for over and under-size threads. Front-gripping and rear-centering chucks are wrenchless, quick acting, universal.

Write today for a free, factual booklet and the name of your nearest Oster Distributor.

THE OSTER MANUFACTURING CO.
Main Office and Factory:
2066 East 61st St. • Cleveland 3, Ohio

Builders of Cost Reducing Threading Equipment Since 1893

For more details circle NED-234 K4 on enclosed inquiry slip

Something better in

WELDING CARBONS!

Where welding operations require high current values for the size electrode being used, Stackpole copper-coated graphite electrodes assure better welds plus maximum economy. They increase current-carrying capacity. They provide better contact between holder and electrode. They reduce the amount of tapering required, last longer and produce better welds. Send details of your application for recommended grade and copy of Stackpole Welding Catalog 1B.

STACKPOLE CARBON CO., *St. Marys, Pa.*

STACKPOLE

WELDING ELECTRODES • WELDING PLATES AND RODS • WELDING PASTE • BRAZING CARBONS • RESISTANCE WELDING TIPS • BRAZING BOATS AND TRAYS.

For more details circle NED-235 K4 on enclosed inquiry slip

FOR JOBS LIKE THESE YOU NEED

PATENTED
SURETY TURN CUFF INDUSTRIAL GLOVES

In addition to the greater hand and arm protection afforded by Surety's exclusive Turn-Cuff design, you can have Turn-Cuffs in the weight and material—natural or synthetic rubber (Neoprene, Sureseal, etc.)—that will give longest, lowest-cost service on each specific job. Your jobber will help you select the right weight and material, or write

CUFFS UP (see photo above). Liquids can't dribble onto arms, trickle inside gloves.

CUFFS DOWN Two inches longer protective gauntlet.

THE SURETY RUBBER CO. Carrollton, Ohio

In Canada, Safety Supply Co., Toronto

For more details circle NED-236 K4 on enclosed inquiry slip

New... Air Drill World's Smallest

It's Really Amazing!

- 3/16" HEAVY DUTY DRILLING
- 1/4" LIGHT DUTY DRILLING
- NEARLY 1/4 H.P.... STALLPROOF
- WEIGHS LESS THAN 1½ LBS.
- USES 38% LESS AIR

Highest precision construction makes this drill revolutionary!

Write ARO or see your ARO distributor.

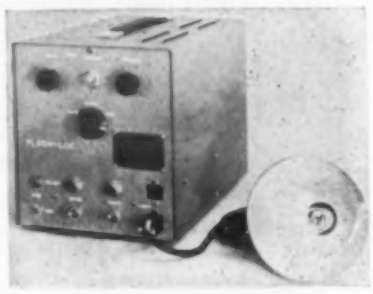
THE ARO EQUIPMENT CORP., BRYAN, OHIO

Offices in All Principal Cities
In Canada—Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO AIR TOOLS
Also . . . AIR HOISTS . . . LUBE EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

For more details circle NED-237 K4 on enclosed inquiry slip

STROBOSCOPIC TEST UNIT for vibration and shock analysis

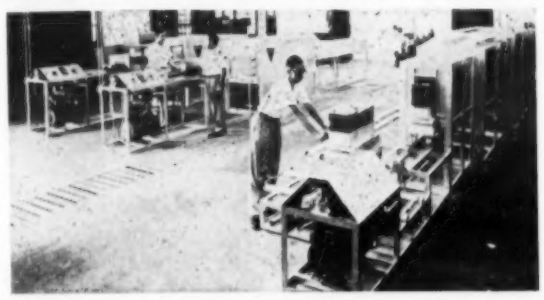


Time consuming adjustments required to synchronize speed of light flashes with vibration of object being tested are eliminated in the Flash-Lok portable stroboscopic test unit. Self-contained device for vibration and shock analysis derives its excitation from electrically driven vibration equipment or from an accelerometer attached to mechanical equipment. Light source flashes at a one or five-cycle rate, differing from the vibrating base to permit slow motion or fast motion study. It also may be locked exactly to the vibration frequency. Synchronization of light source at the difference frequency with vibrating base is maintained automatically throughout the operating frequency range of 30 to 2000 cps. The 21-lb unit operates from a standard 115-v source. Made by **Bendix Aviation Corp.**, York Div., York, Pa.

For more details circle NED-239 K4 on enclosed inquiry slip

SECTIONALIZED TUNNEL KILNS made in varied sizes, modifications for sectional assembly on the job

Although developed for incorporation in automatic production of electronic assemblies utilizing ceramic components, Pereco model TPH-31430 and model



TCH-81054 sectionalized electric kilns are offered in range of sizes and modifications to suit other specific requirements. Illustrated units have an operating temperature of 2500 to 2600° F and an average time cycle of 10 hours. Model at left is 3 ft 2 in. wide x 5 ft ¾ in. high x 33 ft 2 in. long, including hydraulic pusher assembly.

Complete unit consists of 6-ft 6-in. pusher section, 5-ft preheat zone, 8-ft 4-in. high temperature zone and a two-section cooling zone totaling 13 ft 4 in. Pusher stroke length and travel speed are adjustable. Heating elements are silicon carbide resistors placed in three individually controlled banks. An automatic controller and strip chart recorder are incorporated. Made by **Pereny Equipment Co.**, Chambers & Pereco Rds., Columbus 12, O.

For more details circle NED-240 K4 on enclosed inquiry slip

Handy, Husky, Hot— and it's NEW!

Weller's new model Soldering Guns give instant soldering heat up to *275 watts*. Completely new design—more versatile on all soldering jobs—from lab test bench to maintenance at the job site. Perfect balance; uniform heat at the tip—no waiting. Auxiliary tips for smoothing and cutting are inexpensive and easily interchanged with those used for soldering.

4 Models—single or dual heat, light or heavy duty, from 100 to 275 watts.

Shatterproof housing • Longer reach • Dual Spotlights

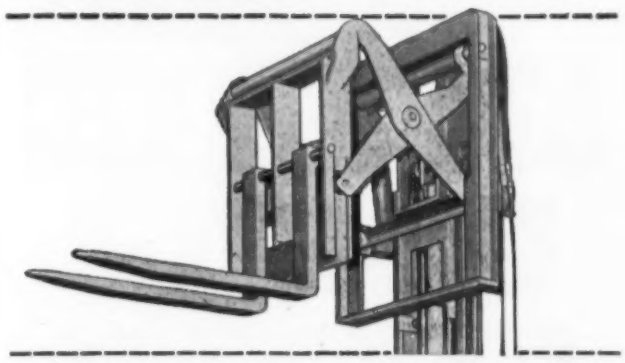
Order from your distributor, or write direct for bulletin.

Weller SOLDERING GUNS
809 Packer Street, Easton, Pa.

THE FINEST TOOLS FOR THE FINEST CRAFTSMEN

For more details circle NED-241 K4 on enclosed inquiry slip

6 FT. AISLES Now you can have them . . .



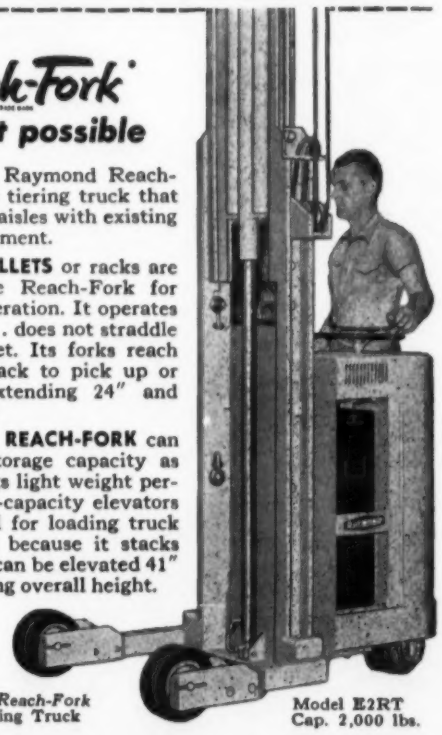
without obsoleting your present racks or pallets

RAYMOND Reach-Fork* makes it possible

IT'S TRUE! The Raymond Reach-Fork is the only tiering truck that operates in 6-ft. aisles with existing warehouse equipment.

NO SPECIAL PALLETS or racks are required by the Reach-Fork for close-quarter operation. It operates from the aisle . . . does not straddle the bottom pallet. Its forks reach right into the rack to pick up or deposit load, extending 24" and back in seconds.

THE RAYMOND REACH-FORK can increase your storage capacity as much as 50%. Its light weight permits use on low-capacity elevators and floors. Ideal for loading truck trailers, boxcars because it stacks pallets closely—can be elevated 41" without increasing overall height.



RAYMOND Reach-Fork Electric Tiering Truck — Model E2RT Cap. 2,000 lbs.

Reach-Fork is equipped with new Raymond power unit that opens like a book for fast, easy servicing. All parts housed behind hinged double doors . . . nothing under unit to inspect but the wheels.

* PATENT NO. 2,564,002

RAYMOND

ELECTRIC INDUSTRIAL TRUCKS HYDRAULIC ELEVATING EQUIPMENT

MAIL COUPON TODAY

The RAYMOND CORPORATION
4131 Madison St., Greene, N.Y.

( ) Please send me latest Reach-Fork Bulletin.
( ) Please have your representative call.

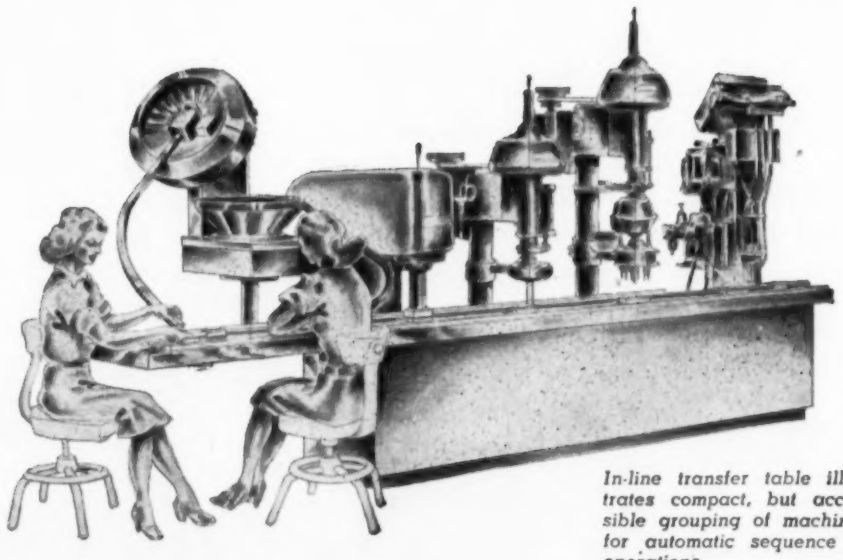
NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-242 K4 on enclosed inquiry slip

DIXON *Automatic* ASSEMBLING MACHINES

Parts *Automatically* transferred to successive machining operations

Can be equipped with hoppers, loaders, presses, welding and soldering devices, riveters, screw drivers, and nut runners.



In-line transfer table illustrates compact, but accessible grouping of machines for automatic sequence of operations.

WRITE FOR FREE INFORMATION

Automatic secondary operations can lower your production costs.

DIXON *Automatic Tool, Inc.*
2303 TWENTY-THIRD AVE.
ROCKFORD • ILLINOIS

For more details circle NED-238 K4 on enclosed inquiry slip

CLEANS METAL PARTS
BETTER • FASTER • CHEAPER

NEW LOW COST BENCH MODEL **JET BLAST**

BENCH MODEL JET BLAST
Other sizes are available

SAVES UP TO 60% IN LABOR COSTS

JET BLAST REMOVES Rust, scale and Foreign Deposits from Dies, Molds, Tools or other precision articles without dimensional alterations. Increases adherance and bonding qualities of paint, porcelain, rubber, electroplated metals and a host of other materials . . . Equally effective for cleaning threads for close, smooth fit.

JET BLAST will give any desired finish on flat or irregularly shaped objects . . . Sharp edges are retained.

JET BLAST is excellent for light burring on hard to-get-at surfaces.

JET BLAST materially increases tool life when used for honing cutting faces after grinding . . . Eliminates costly hand labor.

JET BLAST IS A TOOL ROOM NECESSITY

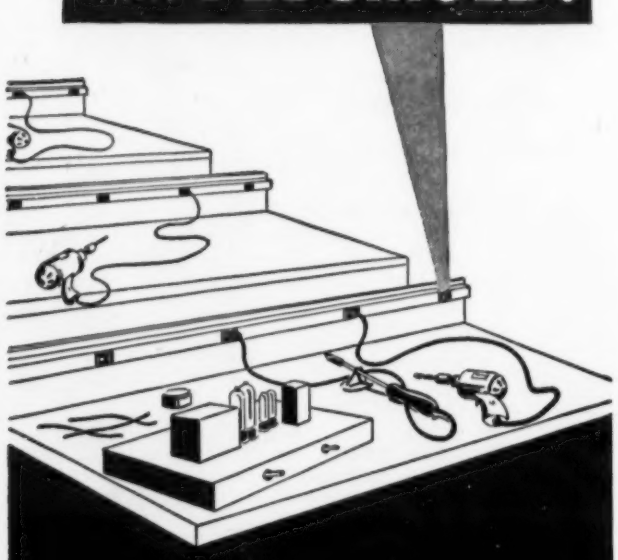
SEND FOR BULLETIN

DISTRIBUTORS: A few territories are still open.

R·W·RENTON and Company
877 ADDISON ROAD • CLEVELAND 3, OHIO

▲ For more details circle NED-243 K4 on enclosed inquiry slip ▲

Need More
POWER OUTLETS?
—they're there
with **PLUGMOLD!**



Modern, ready-wired, continuous outlet system makes plant production MORE EFFICIENT!

Your workers are certain to do a better job when Plugmold gives them plenty of electrical outlets right along their work-benches.

When a drill is needed, an outlet's *there* — plenty for testers, heaters, and every other electrical production tool. Plugmold *eliminates* the need for long extension cords that are hazardous to work and workers.

You can easily install Plugmold anywhere in your plant. Write for the Plugmold booklet today.

Rely on Wiremold's "Big 4" to solve your wiring problems! Plugmold Continuous-Outlet Systems — Wiremold Surface Raceways — Pancake Overfloor Raceways — Wiremold Fluorescent Units.

The WIREMOLD Company
HARTFORD 10, CONNECTICUT

Wiremold products are backed by a firm guarantee.
See page 7 of Wiremold Catalog No. 19.

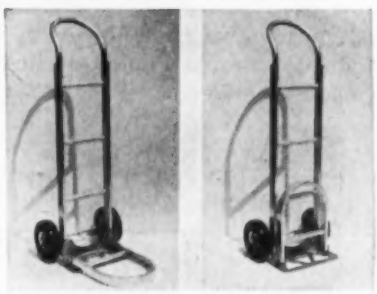
▲ For more details circle NED-244 K4 on enclosed inquiry slip ▲

INDICATING CONTROLLER
sensitive, accurate instrument for proportioning or on-off control

Thermistor is the sensing element in the series 560 temperature indicating controller which operates in range of 0 to 600° F. Portable laboratory and flush or surface-mounted industrial models are available. Instrument is accurate within 0.25-per cent of full scale and easily maintained. Two calibrated adjusting knobs increase bandwidth from minimum value to any desired range. Selector switch permits use as a straight on-off controller or as a time proportioning controller. It can handle up to 10 amp directly, and larger loads with suitable relays. Probe leads can be up to 200 ft long without affecting signal strength or accuracy. Made by **Fenwal Inc.**, 70 Pleasant St., Ashland, Mass.

▲ For more details circle NED-245 K4 on enclosed inquiry slip ▲

HAND TRUCK NOSE EXTENSION
simplifies handling bulky loads



Available in choice of lengths for use with Magcoa magnesium hand trucks, folding nose plate extension facilitates handling large boxes and other bulky loads. Attachment can be folded back out of way when not needed. Easily installed with drill, screwdriver and pliers, this accessory is constructed of lightweight magnesium. Made by **Magnesium Co. of America**, Materials Handling Div., Dept. N, East Chicago 19, Ind.

▲ For more details circle NED-246 K4 on enclosed inquiry slip ▲

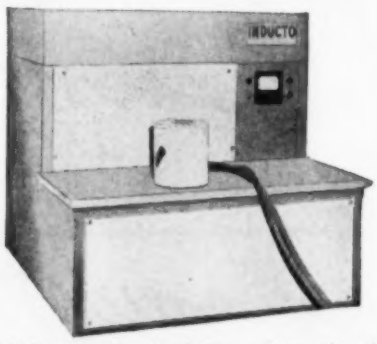
HEAVY-DUTY WELDER
in 300, 400 and 500-amp sizes

Adaptable to wide range of production jobs, model SLP alternating current welder is offered in 300, 400 and 500-amp sizes. Transformer is of shell type, using saturable leakage path for adjustment of welding current. Extra secondary winding supplies current to 40-v selenium rectifier for safe, remote control. Sensitivity of control facilitates welding light or heavy metal. Three-wheeled portable mounting is optional. Made by **Hobart Brothers Co.**, Dept. 205-h, Troy, O.

▲ For more details circle NED-247 K4 on enclosed inquiry slip ▲

INDUCTION METAL MELTER
for laboratory and production use

Ranging in capacity from 1 to 100 lb, Inducto metal melter for ferrous and nonferrous metals is designed primarily for laboratory use and for production runs of small quantities of metal. These 5 to 40-kw units can also be applied to induction heating operations. Features include single control handle and indicating meter, ease of operation and minimum of maintenance. Melting table is integral part of cabinet to save space. Made by **Inductotherm Corp.**, 618 E. Glenolden Ave., Glenolden, Pa.

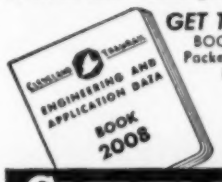


▲ For more details circle NED-248 K4 on enclosed inquiry slip ▲

LUMBER CRANE
Pays For Itself In 13 Weeks

In just 13 weeks the entire cost of crane, runways, and erection was absorbed because of the efficiency that was introduced in the handling of lumber. 10,000 feet are handled per 10-hour-day.

This is one example among hundreds of the savings made possible with Cleveland Tramrail.



GET THIS BOOK! BOOK No. 2008 Packed with valuable information

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6631 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▲ For more details circle NED-249 K4 on enclosed inquiry slip ▲

THIS NEW RESIN SANDER DISC
handles toughest sanding jobs faster... lasts longer... stays sharper

Sharp, fast-cutting aluminum oxide abrasive grain, a resin bond engineered for greater holding power, and a tougher, all-fibre backing is the secret of the new Resin Sander Disc just announced by CARBORUNDUM. This new disc is designed for both snagging and surfacing operations, resisting both edge-wear and the heat of flat contact grinding.

Try a new CARBORUNDUM Resin Sander Disc on the toughest job in your shop—such as exceedingly rough and scale-encrusted welds. See how it beats any other disc for cutting ability, long life, and uniformity. Notice how the edge holds its shape longer, and how the abrasive grain stands up under the most severe grinding conditions.

New Resin Sander Discs are available in 16 through 150 grit in a range of sizes and types to fit all Disc Sanders. The most common diameters of 7" and 9⅛" are always in stock and easily identified by the green back. Packing in moisture-resistant boxes keeps them "factory-fresh," makes handling and storage easier.

FOR A FREE DEMONSTRATION, call your CARBORUNDUM Distributor or Salesman (listed in the yellow pages under "Abrasives" or "Grinding Wheels"). Or, if you prefer, use the inquiry card provided by this publication; or write **The Carborundum Company,** Dept. NED 82-418, Niagara Falls, New York.

"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York.

82-418

▲ For more details circle NED-250 K4 on enclosed inquiry slip ▲

DON'T WASTE MAN HOURS

Get more productive hours by reducing lost time in handling materials. One man, with the aid of a "Canton" Portable Crane, can lift and transport up to 3 tons of material to any part of the plant! For more details on saving man-hours, write today for Bulletin 51.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle NED-251 K4 on enclosed inquiry slip ▲

Type N ROTO-CLONE used for collecting fine dust or stringy particles from rubber processing.

IF YOU PROCESS RUBBER IN ANY SHAPE OR FORM YOU'VE GOT DUST PROBLEMS FOR ROTO-CLONE

Fine dust or stringy particles from the buffing, grinding or machining of hard or soft rubber are readily controlled by ROTO-CLONE. If it's dust generated by Banbury mixer or roll mill or from handling such materials as talc, carbon black, sterates, rosins, etc., ROTO-CLONE can do an equally effective collection job.

Write for Bulletin No. 277 describing the AAF Type N ROTO-CLONE — a compact, hydro-static precipitator for collecting all the above types of dust with highest efficiency.

American Air Filter COMPANY, INC.

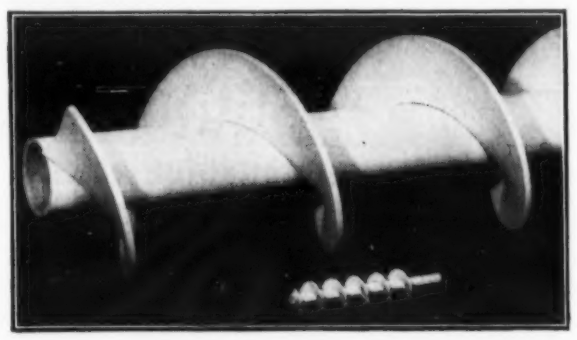
391 Central Avenue, Louisville 8, Kentucky

American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-262 K4 on enclosed inquiry slip

BOTTLES TO BOXCARS

The large worm shown below is used for unloading boxcars while the small worm is used for filling bottles. An illustration of the sizes and designs available.



Helicoid and Ribbon,

WORMS AND SPIRALS

JAMES EAGEN & SONS

150 8th St.

WEST WYOMING, PA.

For more details circle NED-263 K4 on enclosed inquiry slip

to solve SPRAY NOZZLE problems

get your free copy of SPRAYING SYSTEMS CO. CATALOG NO. 24

48 pages of spray nozzle reference data . . . the most complete catalog of its kind ever produced.

let a SPRAYING SYSTEMS CO. sales engineer help you

. . . his specialized experience is yours for the asking.

write to . . .

SPRAYING SYSTEMS CO.

Engineers and Manufacturers

3211 Randolph Street • Bellwood, Illinois

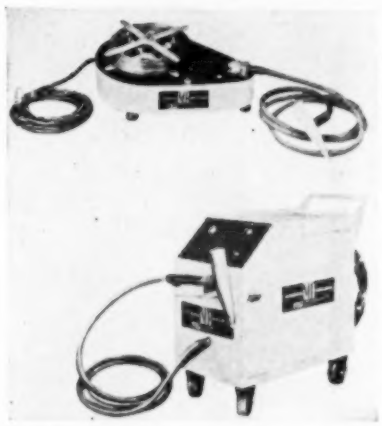
For more details circle NED-264 K4 on enclosed inquiry slip

PORTABLE DRILL GUIDE for horizontal, vertical, angle use

Drill or reamer breakage and product rejections due to tool misalignment are eliminated through use of the Guid-O-Dril attachment for any portable electric or pneumatic drill. It permits inexperienced workers to drill or ream true holes vertically, horizontally or at an angle. Device consists of a quadrant marked in 15-degree graduations for vertical or angular alignment, plus an additional indicator scale for simultaneous alignment in the horizontal plane. A built-in depth gage is also included. Easily installed, it can be removed and replaced in a few seconds without affecting adjustment. Made by **High Standard Mfg. Corp.**, Dept. N, Hamden, Conn.

For more details circle NED-265 K4 on enclosed inquiry slip

SEMIAUTOMATIC WELDER unit regulates wire feed and arc automatically

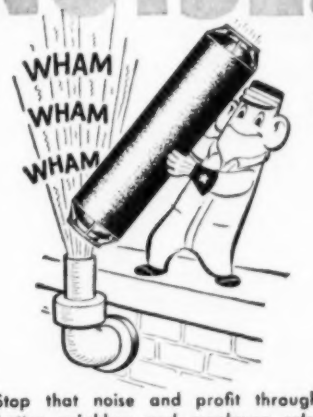


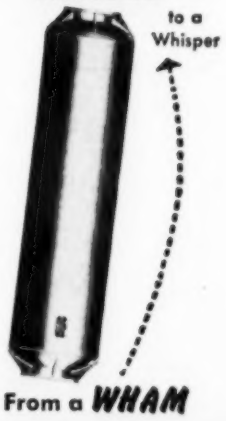
Advantages of hand and automatic welding are combined in the semiautomatic MF welder. It feeds bare wire through a hand-held hopper containing magnetic flux which clings to the wire because of the magnetic field set up by the welding current. Operator can weld steadily for 15 minutes if desired. Primarily a wire-feed and arc-control device, the machine is easily connected to any conventional alternating or direct welding machine and operates over a current range of from 150 to 500 amp.

Magnetic flux provides arc shielding, deoxidation, arc stabilization, slag coverage of molten bead and, in some instances, alloying ingredients. Portable unit weighs 34 lb and cabinet model is slightly larger. Motor voltage and speed or wire feed depends on voltage across the arc. Amount of flux is influenced by density and granule size, both of which can be controlled. Made by **American Brake Shoe Co.**, American Manganese Steel Div., 389 E. Fourteenth St., Chicago Heights, Ill.

For more details circle NED-266 K4 on enclosed inquiry slip

STOP THAT NOISE! from Air, Steam and other gas discharges with BURGESS-MANNING SNUBBERS





Stop that noise and profit through better neighbor and employee relations. Avoid compensation claims.

Burgess-Manning Snubbers are engineered to effectively correct your specific noise problem. There is no obligation for recommendations. Send us a description of your problem.

From a WHAM

BURGESS-MANNING COMPANY

755 East Park Avenue, Libertyville, Illinois

For more details circle NED-267 K4 on enclosed inquiry slip

"The right motor for the job!"

Here are FACTS to help select the BEST A-c. Motor for your application

SELECTION DATA

NEW FRAME AND DIMENSION COMPARISONS

PRICES

ORDERING HELPS

Write for Bulletin B-2102

B-58

RELIANCE ELECTRIC AND ENGINEERING CO.

1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Representatives in Principal Cities

For more details circle NED-268 K4 on enclosed inquiry slip

B.F.Goodrich

TW TIRE AND WHEEL ANALYSIS helps forge plant increase industrial tire service over 500%

THE maintenance men of a large Cleveland forge plant had a real problem on their hands. Industrial tires in heavy-duty service were "falling apart" under heavy loads after only 500 hours.

The local B. F. Goodrich man made a Tire and Wheel Analysis. As a result of his findings, new Deluxe Cushion Pressed-On tires with an oil-resisting compound were placed on a truck in regular service. Most of the trucks in this type of service have since been equipped with B. F. Goodrich oil-resisting-compound tires. Service hours have been increased more than 500%!

Pressed-On Deluxe Cushion tires are available with non-directional traction tread and in some sizes with smooth tread . . . and are made in a variety of compounds to meet any type of service condition. A special process that bonds the tread to the steel base assures positive adhesion of tread for life of the tire.

TW ANALYSIS CAN SAVE YOU MONEY

Just contact your local B. F. Goodrich retailer or mail the coupon below. Without cost or obligation, a trained B. F. Goodrich man will study your materials handling operations and make recommendations that can cut your industrial tire costs . . . reduce maintenance expense. The advice you receive will be unbiased for B. F. Goodrich makes a *complete* line of industrial tires for every type of service. A special TW Analysis is available for manufacturers of industrial equipment.

Here's a close-up of the front tire on the truck pictured above. 2688 hours of service and still rolling!

The B. F. Goodrich Company
Tire & Equipment Division
Department TW-421, Akron 18, Ohio

Please send me:

- ☐ Additional information on your Tire and Wheel Analysis Plan
- ☐ Free copy of "Industrial Tire Guidebook"
- ☐ Free copy of "How to Get Extra Service out of Solid Industrial Tires"

Name_____

Company_____

Street_____

City_____ Zone____ State____

Specify B. F. Goodrich tires when ordering new equipment

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

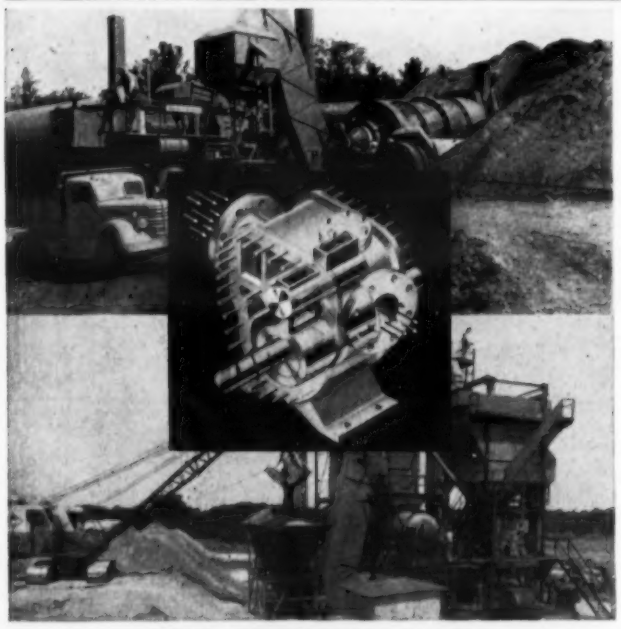
For more details circle NED-269 K4 on enclosed inquiry slip

KAMLOK Couplings combine *speed, perfect performance, durability*—three features that are indispensable. *Fastest!* Perfectly tight, safe connection *in seconds*, by sliding coupler over adaptor, and pressing cam levers. KAMLOKS couple and uncouple *instantly*, regardless of "hookup." *Efficient!* No wasted *time—effort*, achieving leakproof-tight connection that guarantees consistently safe operation at peak efficiency. *Long-lasting!* Made of hard wear-resistant bronze to 3". 4" size of OPALUMIN, as strong as bronze, only ⅓ the weight. KAMLOKS add extra life to hose.

Write for Bulletin F-3

OPW CORPORATION
VALVES, FITTINGS, ASSEMBLIES
for handling hazardous liquids
2729 COLERAIN AVE. • CINCINNATI 25, OHIO

For more details circle NED-270 K4 on enclosed inquiry slip



THEY NEED ACCURACY AND MAXIMUM

Pumping Protection

These asphalt mixing plants are protected against plant shut-down by Kinney Model SD Pumps . . . the positive displacement pumps of maximum durability.

Kinney Model SD Pump's rotary piston mechanism is completely free of vanes, springs, valves, and obstructions. The SD Pump has oversized, jacketed openings for suction and discharge, permitting free pumping of asphalt at lower temperatures. Because of this pump, each of these asphalt mixing plants functions smoothly and uninterruptedly . . . virtually without necessity for pump maintenance or service. The Kinney Pump's high volumetric efficiency insures accurate proportioning of asphalt into the mix. This pump also serves as transfer pump during loading and unloading periods.

Kinney Model SD Pumps are available in forty models ranging in capacities from 1½ GPM to 3000 GPM, steam jacketed in most sizes. Send coupon for details. Kinney Manufacturing Division, Boston, Mass. Representatives in principal cities of the United States and foreign countries.

Kinney

KINNEY MFG. DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612 WASHINGTON STREET • BOSTON 30 • MASS.

Please send Bulletin L-51 describing the complete line of Kinney Liquid Pumps.

NAME _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-271 K4 on enclosed inquiry slip

AUTOMATIC TELEPHONE EXCHANGE handles up to 40 or more lines

All operations normally requiring a switchboard and an operator are handled by this automatic dial telephone exchange. Flick of the dial makes party connection. System requires only two wires from each phone station to the exchange which is about hat box size. Exchange plugs into any 110-v ac outlet for power. It can be tied in with outside trunk lines if permissible, in which case a system of hold and transfer for incoming calls can be incorporated. Other optionals are remote control for a Bliss PA25 amplifier, 25-w paging system, busy signal with "gentle hint" to talking parties and expansion facilities from standard 10 up to 40 or more lines. Made by **Bliss Electronic Corp.**, Dept. NE, Sussex, N. J.

For more details circle NED-272 K4 on enclosed inquiry slip

STEEL STORAGE SILO inside and outside of sealed structure have fused glass surfaces

Constructed of curved plate sections which are bolted and sealed together, the Harvestore steel storage structure has a layer of glass fused to both sides of the steel plate. Silo type unit is built by A. O. Smith Corp. and is designed for use with a sweep-arm mechanical unloader with which materials are unloaded from the flat bottom structure. Unloader permits easy unloading of material that has a tendency to pack and bridge.

Harvestore can be furnished with a breather system of twin vinyl plastic bags in the top and vented to the outside air to prevent intermingling of outer air with the contents. Air sensitive materials can be stored in an inert gas atmosphere. Structure is made in 14, 17 and 20-ft diameters and seven heights from 20 to 50 ft. Capacities are from 2500 to 14,000 cu ft. Special tools, jacks and superintendent of erection are furnished by distributor, **Sprout, Waldron & Co.**, 8 Logan St., Muncy, Pa.

For more details circle NED-273 K4 on enclosed inquiry slip

Research worker making one of hundreds of tests in Anaconda's modern research center.

Has Anaconda the answer to your Magnet Wire problem?

Today, in Anaconda's independently housed development laboratory, scientists are finding answers to *why* magnet wire behaves as it does. And *how* it can be improved. Experiments and tests bring practical solutions to many of today's magnet wire problems . . . and insure better materials and methods for tomorrow. *Have you a magnet wire problem?* Perhaps our laboratory has already uncovered information that will help you solve it. Ask your Anaconda Salesman or write Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.

54429 B

ANACONDA® MAGNET WIRE

For more details circle NED-274 K4 on enclosed inquiry slip

NAME THE CLEANING JOB

. . . you'll save every time with a WHEELABRATOR®

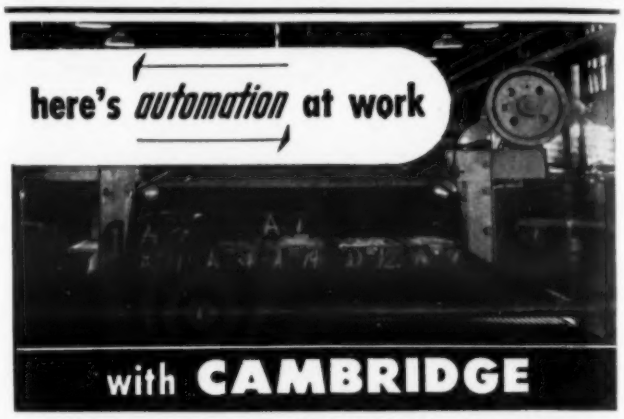
Wheelabrator . . . the modern centrifugal method of airless abrasive blast cleaning slashes costs and cleaning time. Conserves power, labor, space. Its cleaning perfection results in longer tool life, faster machining and inspection.

Thousands are in use for cleaning castings, forgings, heat treated parts, stampings, weldments; plastic deflashing; cleaning used auto parts, drums, pipe, valves, floor scrubbers; descaling steel strip, sheet, plate, etc.

26 standard sizes and models plus numerous Special Designs available for every cleaning need. Write for Catalog 74-B.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

For more details circle NED-275 K4 on enclosed inquiry slip



WOVEN WIRE CONVEYOR BELTS!

Automation—*continuous, automatic production*—is provided here by this Cambridge Woven Wire Conveyor Belt carrying optical glass through high temperature annealing.

Cambridge belts can help increase automation in your plant, too. They're all metal, and can be woven from any metal or alloy. Thus, they're impervious to damage from heat, cold or corrosive conditions. Open mesh allows free circulation or drainage of process atmosphere or solution. Available in varied specifications for varied loads, and with special attachments to hold bulk materials on the belt during flat or inclined movement.

Get the full story—FREE! Write today for your copy of technical manual of belt applications. Or call in your Cambridge Field Engineer. See "Belting-Mechanical" in your classified phone book, or write direct.

The Cambridge Wire Cloth Co.

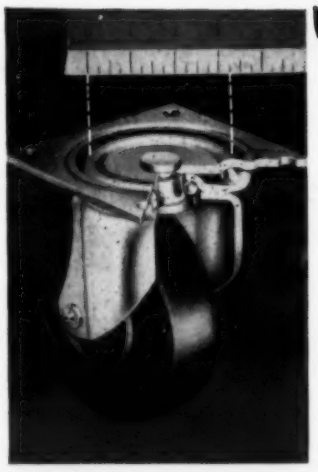
WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department C
Cambridge 10, Maryland

—OFFICES IN LEADING INDUSTRIAL AREAS—

For more details circle NED-276 K4 on enclosed inquiry slip

Sure cure for the "wobbles"



Bigger swivel bearing area on Bassick Series 99 casters keeps even heavy loads steady, guards against costly accidents.

These high-quality, double-ball bearing casters have a main swivel bearing diameter at least 1⅛" greater than wheel tread width. This makes for wobble-free performance, longer life, easier swiveling, reduced wear.

Write for complete specifications on the cost-cutting Bassick Series 99 casters. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Bassick A DIVISION OF STEWART SW WARNER

MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

75 YEARS OF CASTER LEADERSHIP

For more details circle NED-277 K4 on enclosed inquiry slip

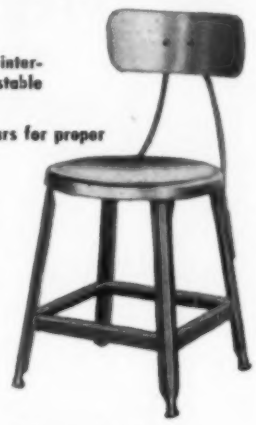
standardize on standard HALLOWELL®

POSTURE STOOLS AND CHAIRS

designed for comfort while working

LOOK AT THESE FEATURES

- Posture back rests, interchangeable and adjustable
- Spring steel back bars for proper posture
- Seats designed for comfort, plain or Presdwood covered
- Angle braces and angle legs for strength and rigidity

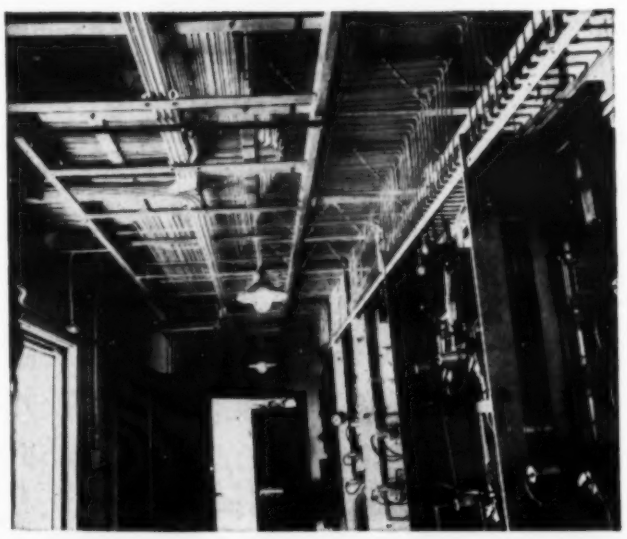


This and other HALLOWELL Posture Stools and Chairs are stocked and sold by leading industrial distributors. Write for literature. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

HALLOWELL SHOP EQUIPMENT DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-278 K4 on enclosed inquiry slip

Montana refinery cuts cost 40% with ALCOA UTILITUBE®



50,000 feet of ALCOA Aluminum Coiled Tube serves air, dried by ALCOA Activated® Alumina, to the catalytic cracker and gas plant of Farmers Union Central Exchange, Inc. refinery, Laurel, Montana. Partially exposed to hydrogen sulfide and sulphur dioxide fumes, tubing shows no corrosion since installation in October, 1952.

USE ALCOA UTILITUBE TO SAVE MONEY. It's the lowest cost corrosion-resistant metal tube you can buy . . . may very easily cut your tube costs by 40 per cent!

USE ALCOA UTILITUBE for fuel and lube lines, for hydraulic fluids, for air and refrigerants. It will not gum or sludge in petroleum service, nor will it discolor or contaminate the fluid it carries.

ALCOA UTILITUBE forms, flares and bends as easy as annealed copper yet work hardens less. At sub-zero temperatures it actually gets stronger!

ALCOA UTILITUBE AND FITTINGS are available from your aluminum distributor. For complete information, write for the booklet: *Alcoa Utilitube.*

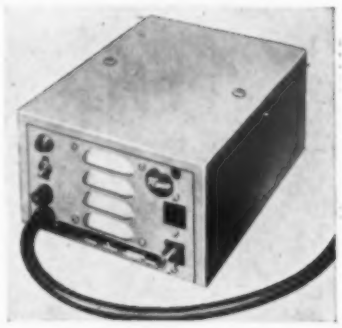
ALUMINUM COMPANY OF AMERICA
1002-K Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

For more details circle NED-279 K4 on enclosed inquiry slip

RADIO COMMUNICATIONS SYSTEM links power trucks with dispatcher



Designed for use in materials handling, Carrierphones permit two-way communication between operators of fork lift or other trucks or mobile vehicles and a central dispatcher. Any number of mobile stations can be handled in a single system, providing telephone-clear speech at normal voice level. Communication is established by induction between individual vehicle loop antennas and a fixed antenna wire strung from dispatcher station over the operating area. Illustrated unit is the combination transmitter-receiver. It draws power from vehicle battery at any standard voltage or can be used with 117-v ac. Radio interference is not caused by system, which can be operated without Federal Communication license. Made by **Femco, Inc.,** Irwin, Pa.

For more details circle NED-280 K4 on enclosed inquiry slip

AIR-HYDRAULIC POWER UNIT 7-in. stroke has terminal force of 2100 or 5600 lb on closing

Fast action, damped terminal stop, powerful finish pressure and reversability are operating features of this Hydro-Air power unit. Originally developed as power component of garment pressing equipment, pneumatic-hydraulic power unit is adaptable to machinery which must close under strong loading. Stroke is 7 in., terminal force is 2100 or 5600 lb and air requirement per cycle is 0.11 cu ft at shop airline pressure.

Unit consists of three cylinders. One provides long pneumatic stroke. Second gives 12 to 1 hydraulic multiplication of the trapped oil pressure. Third is booster cylinder which triggers the high-pressure finish stroke. Latter is available in two sizes for regular or heavy-duty finish pressure. Second cylinder incorporates constant deceleration, terminal checking and temperature-independence features.

Main stroke speed is adjustable. Extra hydraulic closing force at the end of the forward stroke is independently adjustable from zero up to either the 1 or 3-ton limit. Made by **Pantex Mfg. Corp.,** Pneumatic Design Dept., 521 Roosevelt Ave., Pawtucket, R. I.

For more details circle NED-281 K4 on enclosed inquiry slip

STOP WASTING DRILLS!

FREE BOOKLET...

Shows how to prevent excessive drill breakage, vastly prolong drill life . . . and eliminate time wasted by valuable skilled mechanics grinding drills!

Black Diamond's "Positive Positioning" feature positions drill to exact twist you want . . . *automatically.* Now anyone can sharpen and web-thin with scientific accuracy . . . on a Black Diamond Drill Grinder!

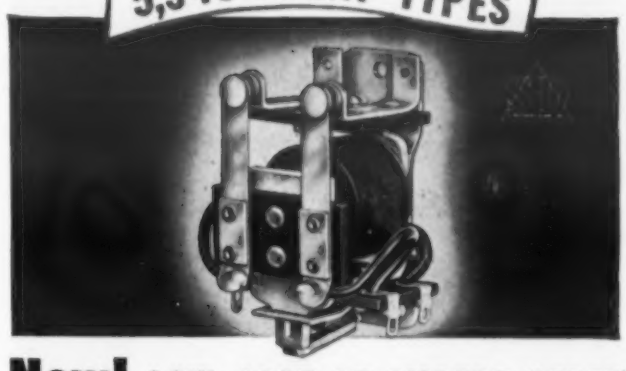
WRITE TODAY!

BLACK DIAMOND

SAW & MACHINE WORKS, INC. 72 NORTH AVE. NATICK, MASS.

For more details circle NED-282 K4 on enclosed inquiry slip

STRUTHERS-DUNN 5,348 RELAY TYPES



New! LOW COST 15-AMPERE RELAY

. . . This new 215-Frame Struthers-Dunn relay is specifically designed for today's "cost conscious" engineering . . . and it's backed by full S-D quality and dependability.

Write for S-D Relay Data Bulletin 2215 to Struthers-Dunn, Inc., Pitman, N.J.

SPECIFICATIONS

RATINGS: 15 amperes at 115 volts AC or low-voltage DC.

CONTACTS: Single- and double-pole; single- and double-throw.

COILS: AC to 230 volts; DC to 115 volts.

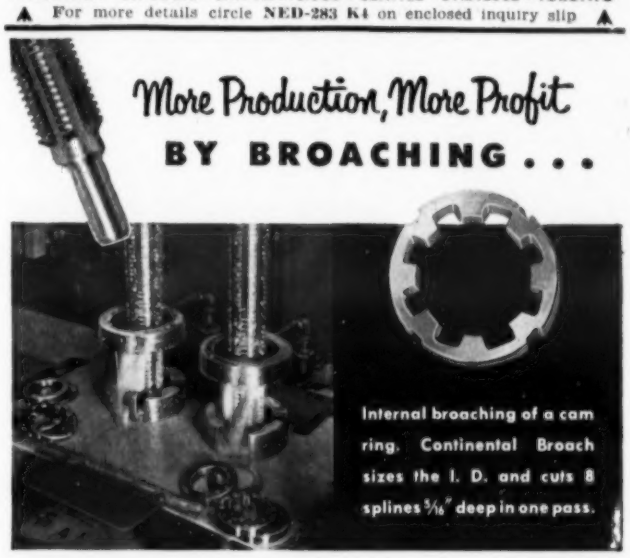
SENSITIVITY: Normal AC, 3 va.; minimum AC, 0.5 va.; normal DC, 2 watts; minimum DC, 0.1 watts.

GET THIS QUICK GUIDE . . . to the most popular of the S-D 5,348 relay types.

ATLANTA • BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO CINCINNATI • CLEVELAND • DALLAS • DETROIT • KANSAS CITY • LOS ANGELES • MINNEAPOLIS • MONTREAL • NEW ORLEANS • NEW YORK PITTSBURGH • ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

For more details circle NED-283 K4 on enclosed inquiry slip

More Production, More Profit BY BROACHING . . .



Internal broaching of a cam ring. Continental Broach sizes the I. D. and cuts 8 splines 5/16" deep in one pass.

REMOVE STOCK TO PRECISION LIMITS—FAST . . . ROUGH AND FINISH IN ONE PASS

Many broaching operations do precision work in far less time than other metal-cutting methods. Continental has for years been designing all types of cutting tools and broaches.

For facts and recommendations about increasing your production by broaching, call in your local Ex-Cell-O representative—or write Continental in Detroit for Cutting Tool Catalog.

54-44

CTW CONTINENTAL TOOL WORKS

Division of Ex-Cell-O Corporation, Detroit 32, Mich.

STANDARD AND SPECIAL CUTTING TOOLS, BROACHES, BROACH FIXTURES

For more details circle NED-284 K4 on enclosed inquiry slip

Cutting costs in thousands of drafting rooms

Kodagraph Reproduction Materials eliminate tedious retracing . . . produce better shop prints . . . simplify print production. Whether you make your own prints or use a blueprinter, it will pay you to know them.

Paper, gives you positive photographic intermediates directly from blueprints and other negatives.

Kodagraph Contact Paper is designed for use in contact photocopy printers . . . produces outstanding negatives.

Kodagraph Autopositive Papers and Film produce positive photographic intermediates without a negative step; can be exposed in standard printmaking equipment . . . processed in standard photographic solutions. Fast, easy roomlight handling!

Kodagraph Projection Papers give you highest quality enlargements from microfilm or other reduced-scale negatives.

Write today for free booklet which describes all these materials.

Kodagraph Repro-Negative

Kodagraph Reproduction Materials

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak TRADE-MARK

For more details circle NED-285 K4 on enclosed inquiry slip

For faster work at less cost—
M & T's New D.C. Rectifier Welder

INSTANT ARC
STABLE ARC
STEPLESS CURRENT CONTROL
SILICONE INSULATION
LESS WORKER FATIGUE

This 400 amp selenium rectifier is a standout in M & T's complete line of Welding Machines, Murex Electrodes and M & T Accessories. Write today for full information, or advice on any welding problem.

METAL & THERMIT CORPORATION
100 East 42nd Street, New York 17, N. Y.
MUREX ELECTRODES • ARC WELDERS • ACCESSORIES

For more details circle NED-286 K4 on enclosed inquiry slip

BULK SHIPPING CONTAINER
three capacities available for granulars, powders and pastes

Empty Nest-A-Bin aluminum bulk shipping containers can be disassembled and placed one within the other, thereby occupying an average of only 10 per cent of the usual floor space required. Nesting also reduces storage and freight costs. Redesigned bin for use in shipping, handling and dispensing granulars, powders and pastes is made up of three components—two tapered rectangular halves to contain material being shipped and a four-legged base.

Bin measures 42 x 53 in. and varies in overall height from 5 ft 10 in. to 6 ft 10 in., depending upon capacity. Three standard sizes hold 63, 70 or 77 cu ft of dry commodities. Handling can be by fork lift or pallet truck or overhead crane or, when empty, by hand. Bins fill from top and empty from bottom and are easily adaptable to standard filling and discharging equipment. All openings are sealed with plastic gaskets. Made by **Willys Motors, Inc.**, Kaiser Nest-A-Bin Div., 880 Doolittle Dr., San Leandro, Calif.

For more details circle NED-288 K4 on enclosed inquiry slip

STATIONARY BATTERIES
10 to 770 ampere-hour capacities

Designed specifically for use in switchgear, control and auxiliary power applications, line of stationary batteries features extra-thick positive plates with thick insulation suspended from ledges molded into the jar. Normal plate growth is thus allowed without strain on the cover. Two lines, PlastiCell and PlastiCal are made in capacities from 10 to 770 ampere-hours. PlastiCell type is for full-float operation where a life expectancy of 14 years in float service normally applies. PlastiCal type features lead calcium grids and has a life expectancy of 25 years in full-float service. Both lines have clear one-piece plastic jars, negative plates supported on heavy ribs molded into the jar bottom, safety vents and Plastite post seals which eliminate acid creepage. Made by **C & D Batteries, Inc.**, 408 Washington Ave., Conshohocken, Pa.

For more details circle NED-289 K4 on enclosed inquiry slip

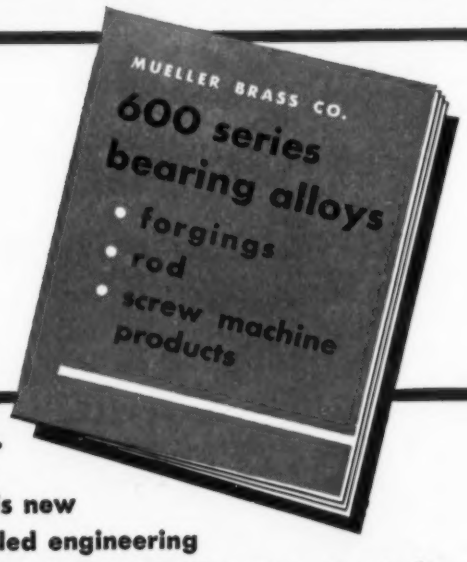
FOR COMPLETE PROTECTION
FROM THE WET • GREASE • OILS • ORDINARY ACIDS
TOWER'S
FISH BRAND
*NEOPRENE

These sturdy, durable, 100% DuPont NEOPRENE garments give that extra service to those who require protection from greases, oils, and most acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

*A chemical rubber product of the DuPont Company
For folder of styles and detailed information write Department SF.
NEOPRENE RUBBER
TOWER'S FISH BRAND
A. J. TOWER CO.
24 SIMMONS ST. BOSTON, MASS.
TOWER'S ARROW BRAND

For more details circle NED-291 K4 on enclosed inquiry slip

get all the facts about
MUELLER BRASS CO.
600 series bearing alloys



in this new detailed engineering handbook . . . write for your copy today
MUELLER BRASS CO., PORT HURON 27, MICH.
132

For more details circle NED-292 K4 on enclosed inquiry slip

NOW TWO GREAT NAMES IN MATERIALS HANDLING COMBINED!

THOMAS TRUCK
of Keokuk
announces the purchase of
THE LANHAM COMPANY
of Louisville, Kentucky

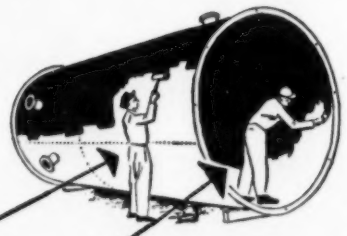
LANHAM
FOR LIFETIME

The addition of the famous LANHAM line of Skid Platforms, Skid Boxes and Allied products will enable THOMAS to offer a more complete service to their customers in the quality materials handling products field. The LANHAM name will be used in the marketing of these products and distribution will be continued by Lanham sales representatives throughout the country. THE LANHAM SKID CO. offices and production facilities are now located at Keokuk, Iowa.

THOMAS
THOMAS TRUCK & CASTER CO.
574 MISSISSIPPI RIVER • KEOKUK, IOWA

For more details circle NED-287 K4 on enclosed inquiry slip

Gaco has the two correct approaches to your corrosion problems



N-700*
Maintenance Coating
Protects against ALL FUMES

Gaco N-200-1
Heavy duty Liquid Lining
means peak IMMERSION SERVICE

Nothing else protects like GACO Neoprene —real rubber in a can.

Gaco authorized Neoprene Application Shops.
For your *additional* service completely equipped shops and trained personnel are located in every large industrial center to apply GACO Neoprene to your tanks and other equipment.

*Patent applied for.

Send me all the facts about genuine Neoprene Corrosion Protection.
Name _____
Company _____
Address _____
GATES ENGINEERING COMPANY
100 S. West St. • Wilmington, Delaware
The pioneer maker of Neoprene protective coatings and linings. N 10

For more details circle NED-290 K4 on enclosed inquiry slip

It's packed with ideas for product designers . . . a completely new edition of the booklet
"APPLICATION IDEAS"
by
GAST

showing actual practical O.E.M. applications like this . . .

Get Your Free Copy Now!

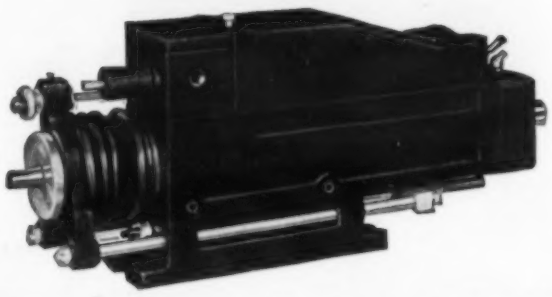
For Gast rotary
AIR MOTORS
. . . 1/20 to 4 h.p.
. . . 100 to 6,000 r.p.m.
COMPRESSORS
. . . up to 30 p.s.i.
. . . ½ to 24 c.f.m.
VACUUM PUMPS
. . . up to 28 in.
. . . ½ to 24 c.f.m.

Original Equipment Manufacturers for Over 25 Years
GAST ROTARY
AIR MOTORS • COMPRESSORS • VACUUM PUMPS
(TO 4 H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-293 K4 on enclosed inquiry slip

Bellows-Locke DRILL UNIT

Combines Hydraulic Feed
Air Powered Rapid Advance
Electrically Driven Spindle



Full 3" stroke — any part usable. Takes up to 5/16" drills. Either pulley driven or direct motor drive models available. Compact, streamlined, lightweight Can be mounted at any angle in any plane. Any number of units can be easily synchronized and interlocked for accurately timed sequence operation.

Write for Bulletin BL-5 Address Dept. NED 1054
910A

The Bellows Co.
AKRON 9, OHIO
In Canada:
Pneumatic Devices of Canada, Ltd., Toronto, Ontario

For more details circle **NED-294 K4** on enclosed inquiry slip

---

thousands of users PROVE "HI-TEMP" C-5 THREAD COMPOUND IS BEST FOR ALL STUD THREADS and STAINLESS STEEL APPLICATIONS

- ✔ speeds up dis-assembly time
- ✔ prevents stud breakage
- ✔ eliminates pitting of stainless steel

NO MORE FROZEN OR GALLED STUDS ...EVEN AT 1800°F

Let us SEND you a **FREE SAMPLE** so you can PROVE to YOURSELF that C-5 will lick your toughest stud breakage problems!

To assure easy maintenance on products having threaded assemblies many leading product engineers have specified the use of Fel-Pro C-5 as an anti-seize coating on stud threads prior to final production line assembly.

Fel-Pro's exclusive Colloidal-Copper formula allows for easy separation and reduces stud breakage of threaded assemblies after long exposures to extreme temperatures. It eliminates pitting of stainless and alloy steel even where dissimilar metals are joined.

Conduct your own tests with C-5 "Hi-Temp" at our expense. Write on your company letterhead for Free Sample and complete data sheet TODAY!

FELT PRODUCTS MFG. CO. 1510 Carroll Ave., Chicago 7, Ill

For more details circle **NED-295 K4** on enclosed inquiry slip

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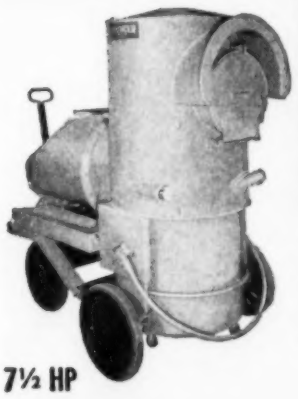

7½ HP

FOR THE BIG CLEANING JOBS IN INDUSTRY

This is the new heavy duty Spencer Portable Vacuum cleaner, reduced in height so that it will go through any factory door or onto most elevators. Its 7½ HP will supply more than enough vacuum power for two operators working at once. The dirt capacity is large—removable can rolls on casters. It will pick up heavy metals, reclaim foundry sand, remove hot materials and clean the largest factory areas in record time. Smaller machines for office and normal industrial service. Ask for Bulletin No. 102 and 112.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
466-M

For more details circle **NED-296 K4** on enclosed inquiry slip

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LIGHTING FIXTURE
mounts directly to ceiling

Available either with louvers or with matt-finish diffuser, Omega-Plex lighting fixture is a complete unit ready for on-surface mounting. It can be used individually or combined in a variety of lighting designs. Width dimensions are to the exact inch module, so that the various sizes can be precisely coordinated with other building materials. As illustrated, either louvers or diffuser swing down and lift out for maintenance, giving easy access to ballasts and lampholders. Fixture is available in 2 x 2, 2 x 4, 1 x 4 and 4 x 4-ft sizes. Made by **F. W. Wakefield Brass Co.**, Wakefield Pk., Vermilion, O.

For more details circle **NED-297 K4** on enclosed inquiry slip

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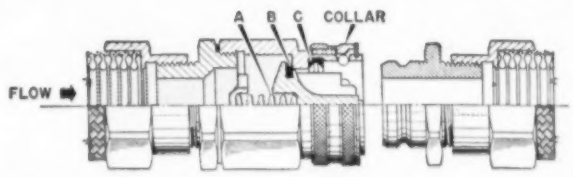
SELF-SEALING COUPLINGS
single and double check valve type units fit up to 12-in. diameter hose

Particularly applicable for high-pressure heavy-flow lines in steel, oil, construction and other industries, quick-sealing leakproof hose couplings have built-in



single or double check valves. One or both ends of the hose line are sealed closed, depending upon which type is used, the instant the coupling is opened. Check valves open automatically when couplings on end of fluid line are joined.

As shown in cross-section drawing of single-check valve, internal spring (A) keeps check valve (B) closed when coupling is disconnected. End of fluid line is sealed tight by gasket ring (C) on valve. Interchangeable female pipe thread, male pipe thread, expansion ring and barb shank coupling styles are available.

Full swiveling design prevents kinking of hose. Bearing surfaces are heat treated, and ball bearings and springs are stainless steel. Eight standard sizes from ¼ to 2 in. are available from stock, and ten special sizes from 2½ to 12 in. can be supplied on order. Standard construction includes cadmium plated steel with neoprene and Buna-N seals. Aluminum, brass, stainless steel and alloy constructions are available with special seal materials. Made by **Titeflex, Inc.**, 548 Frelinghuysen Ave., Newark 5, N. J.

For more details circle **NED-298 K4** on enclosed inquiry slip

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ALGRIP SAFETY FLOORING PAYS FOR ITSELF IN LOWER INSURANCE COSTS

Crippling accidents that cut production, hurt morale and push insurance premiums too high, can be stopped quickly, simply, permanently in any plant with ALGRIP. For ALGRIP Abrasive Rolled Steel Floor Plate installed in danger areas ends accidents at once and brings insurance costs down fast.

Hundreds of tiny abrasive particles are impregnated *to a controlled depth of penetration* into each square foot of ALGRIP's tough steel plate giving it a "grinding-wheel" grain surface that stays non-slip even when wet or splashed with oil—even on steep inclines! And ALGRIP's surface never becomes smooth because wear only exposes new gripping particles . . . an exclusive ALGRIP safety feature.

Investigate ALGRIP now. You'll find it pays for itself in insurance savings.

Send today for full details on how ALGRIP can save money for you. There's no obligation.

A.W. ALGRIP *Abrasive Rolled Steel Floor Plate*

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send free booklet AL-4 on savings from safety with ALGRIP.

Name _____
Company _____
Address _____
City _____ Zone ____ State ____

For more details circle **NED-299 K4** on enclosed inquiry slip

---

Wire Shapes and Forms TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle **NED-300 K4** on enclosed inquiry slip

---

Clark puts the driver where he belongs

...on the new ELECTRIC TOWING TRACTOR

Clark's new electric towing tractor, rated up to 3000 lbs. breakaway drawbar pull, is the first *true* tractor-type electric machine on the market. The driver sits where he belongs—at the rear of the tractor, within arm's reach of the coupler. Another advantage of this basic design is the well balanced distribution of battery weight for both maximum driving and steering traction. Regardless of steep ramps or heavy pulls, there is no "bucking" with the maximum battery weight positioned within the wheelbase. And like Clark electric lift trucks, the new tractor is designed to work a longer cycle without recharging batteries—the maximum in battery efficiency.

- Finger-tip direction control
- Four speeds forward and reverse
- Four coupler types available
- Straight series wound motor: develops comparatively large increases in torque with only moderate increase in current draw; 36 to 48 volts; sealed-for-life bearings.
- Parts interchangeability: Many components are common to the Clark line of electric lift trucks.

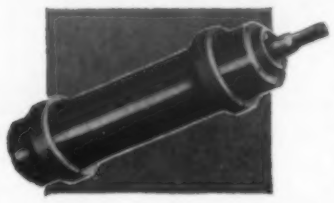
Industrial Truck Division
CLARK EQUIPMENT COMPANY, Battle Creek 21, Mich.
☐ Send information on Electric Tractor

CLARK® EQUIPMENT

Name _____
Firm Name _____
Street _____
City _____ Zone ____ State ____

For more details circle **NED-301 K4** on enclosed inquiry slip

FOR LOW MAINTENANCE
Westinghouse Type "A" Pneumatic Cylinders



● Maintenance is no problem with these streamlined Westinghouse Type "A" Pneumatic Cylinders. They have only a few wearing parts, and *all* parts are strong and durable to assure long life in hard service. A wrench grip on the push rod makes servicing easy and adds to the life of the rod.

Westinghouse Cylinders are built with or without cushioning. They are light, compact and fast acting.

Standard construction is steel but for corrosive uses, brass bodies and stainless steel push rods can be supplied.

Diameters run from 1½" to 10" with strokes from 1" to 42"—and longer if push rod is in tension. Units can be foot-mounted, flange-mounted, or pivot-mounted.

Write for booklet 9308-2

Westinghouse Air Brake COMPANY

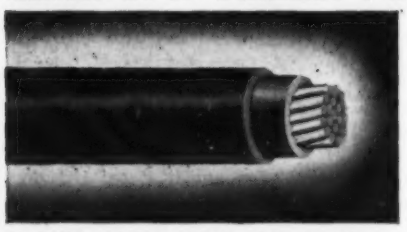
INDUSTRIAL PRODUCTS DIVISION — WILMERDING, PENNSYLVANIA

Pneumatic cylinders, valves, engineered pneumatic systems and air control devices of all kinds.

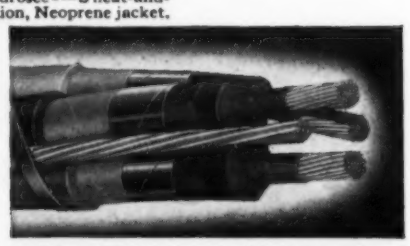
Factory Branch: Emeryville, Calif. Distributors throughout the United States ... See your Classified Directory.
Distributed in Canada by: Canadian Westinghouse Co. Ltd., Hamilton, Ont.

▲ For more details circle **NED-304 K4** on enclosed inquiry slip ▲

10 reasons why you should specify, buy, install U. S. GRIZZLY POWER CABLES



U. S. Grizzly® Power Cable, 600 volts—Type RR, single conductor, Hydrosec®—S heat-and-moisture-resistant insulation, Neoprene jacket.



U. S. Grizzly® Power Cable, 5,000 volts—Type RR, 3-conductor, Uskorona®—ozone-resistant insulation—shielded—Neoprene jacket.

1. Lighter in weight than lead-sheathed cable and lead-sheathed armored cables.
2. Greater flexibility.
3. Easier to handle during installation.
4. Easier to splice, tap and terminate.
5. More resistant to chemical corrosion.
6. Unaffected by stray currents.
7. Better protection against weathering.
8. Longer life.
9. Cost less.
10. Made by United States Rubber Company, the *only* electrical wire and cable producer to grow its own natural rubber, make its own synthetic rubber and manufacture its own plastics.

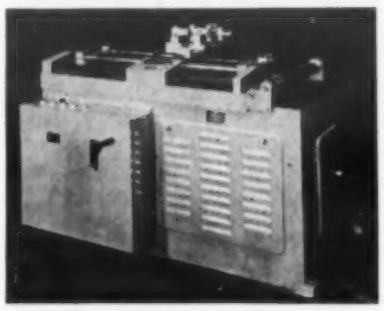
U. S. Grizzly Power Cables are used for general power distribution, and can be installed in conduits, underground ducts, buried directly in the ground, or installed aerially. Neoprene jacket protects against acids, alkalies, oils, and mechanical damage and weathering. (All IPCEA and NEMA specifications complied with.)

Write to address below for free catalog, U. S. Electrical Wires and Cables.

UNITED STATES RUBBER COMPANY
Electrical Wire and Cable Department
Rockefeller Center, New York 20, N. Y.

▲ For more details circle **NED-305 K4** on enclosed inquiry slip ▲

SLIDE FEEDER
handles materials up to 24 in. wide and feeds up to 24 in. at one stroke

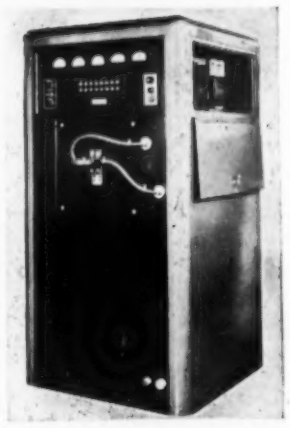


Cabinet - mounted, motor driven model SFC - 24 - 24 slide feed machine for use in automatic press operations handles material up to 24 in. wide with feed length adjustable to 24 in. at one stroke. Counting unit furnished as part of equipment can be preset to allow feed to make any number of strokes up to 400 before press is tripped. Thus, feed lengths well over 24 in. can be made.

Features include variable speed drive; electrically-controlled, air-operated gripper mounted in feed block; air-operated check; inching control for inching material into dies; pushbutton for single tripping press; automatic arrangement for single stroke operation; stock guides; and 3-hp motor with electric clutch and brakes. Made by **U. S. Tool Co.**, Dept. N, Ampere (East Orange), N. J.

▲ For more details circle **NED-306 K4** on enclosed inquiry slip ▲

INDUCTION HEATING CONTROL
for hardening, brazing, annealing with deep penetration of heating



This motor generator control and heating station is designed for forging, hardening, brazing or annealing operations where deep penetration of heating is desired. Meters can be located on front, right or left side, and output transformer can be installed or removed through either front or rear of station. Supervisory system of Checklites maintains check on air and water temperature, high voltage interlocks, water flow and other operating conditions of both motor generator and work stations.

Four-circuit synchronous timer automatically controls three operations in addition to heat cycle. Optionals include water-cooled variable ratio output transformer of 300-kw capacity and a magnetic amplifier for supplying regulated voltage to motor generator field for control of power output. Steel cabinet measures 39 x 39 x 76 in. Generator sets with frequencies of 960, 3000 or 9600 cycles and power inputs from 50 to 1250 kw are also available for use with station. Made by **Lindberg Engineering Co.**, 2444 W. Hubbard St., Chicago 12, Ill.

▲ For more details circle **NED-307 K4** on enclosed inquiry slip ▲

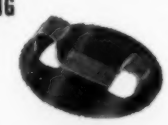
Do you know this about Laminates?

SHEET COMBINATIONS
Synthane can be bonded securely to rubber, metal and other materials.

TUBING COMBINATIONS
Synthane can be cured directly onto metal tubes or rods to form a tight, permanent bond.

PRINTED SYNTHANE
Despite Synthane's hard, smooth surface, we can print on it to make instrument panels, dials, and other components. The process is permanent; the impressions stay put.

POST FORMING
Certain grades of Synthane may be reheated and post-formed.



SYNTHANE
SYNTHANE CORPORATION
N. E. RIVER ROAD, OAKS, PENNA.
Manufacturers of Laminated Plastics

Please send me a copy of the Synthane catalog.

Name_____

Address_____

City_____ (zone)_____ State_____

▲ For more details circle **NED-308 K4** on enclosed inquiry slip ▲

Here's a CONVEYOR BELT that TRACKS PERFECTLY

ALIGNMENT has always been a problem with conveyor belts. If your conveyor is bumpy or the least bit out of line, the belt won't track perfectly. Buffalo's solid woven cotton conveyor belts are the belts with the "built-in bounce" for perfect tracking and accurate alignment. By the very nature of the weave in these belts, they will not fight an obstacle when they come to it. They merely mold themselves around it and then straighten out for years of extra service. Extra strong but light weight in operation, these belts are easier on your motors and equipment, clean, adaptable to most any conveying job and inexpensive. With lower first costs and lower upkeep, these belts are replacing costlier, heavier belts in many operations. Investigate before you buy!

FREE
14 Page Guide to Buying the Right Conveyor Belt for your Particular Job. Illustrated Uses, Maintenance Tips, Sizes, Prices.

BUFFALO WEAVING & BELTING COMPANY
209 CHANDLER STREET — BUFFALO 7, NEW YORK
NEW YORK PHILADELPHIA CHICAGO DETROIT LOS ANGELES

▲ For more details circle **NED-309 K4** on enclosed inquiry slip ▲

LOCKER HANDLE *Latest Style!*

Berger Key-Control Steel Locker Provides Automatic Safety

The key is the only handle required to open this revolutionary new steel locker by Berger. Remove the key, and the door pre-locks *automatically*. Close the door and the user gets instant, full-time protection for his personal property. He never again has to rely on memory for locker security.

Key-Control eliminates handle maintenance, reduces unnecessary noise. And only Berger offers Key-Control—plus the largest selection of steel lockers. Get all the facts from your Berger representative, or write us direct for details, specifications and quotations.

REPUBLIC STEEL CORPORATION
BERGER MANUFACTURING DIVISION
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

▲ For more details circle **NED-310 K4** on enclosed inquiry slip ▲

is the POWERKEET nipping at your profits?

The Powerkeet can hop off with wasted or improperly applied power unless you're careful to keep him caged by observing the simple, sensible practices outlined in the *Champion Maintenance Manual** and by maintaining a plentiful supply of efficient, dependable, long-lasting CHAMPION Lamps.

**Let us mail you a complimentary copy.*

CHAMPION LAMP WORKS
586 Broad Street • Lynn, Massachusetts

▲ For more details circle **NED-311 K4** on enclosed inquiry slip ▲

...you can read any surface temperature in your plant...accurately and easily...with the Alnor Portable Pyrocon.

Compact in size, complete in precision design and workmanship, this rugged instrument assures the highest standards of speed, accuracy and dependability. You can take temperature readings on materials in process, the finished product or the heated equipment itself—in as few as 3 seconds!

Alnor Portable Pyrocons come in scale ranges to 2000° F., with thermocouples for every application. You'll find full details on the Pyrocon exactly suited to your operations in Bulletin 4257. Send for your copy now. Write: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

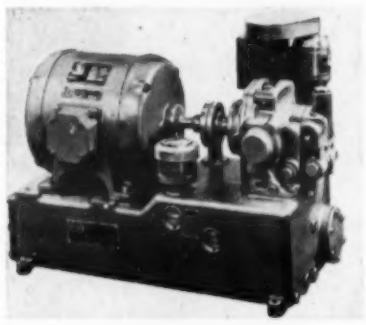
For more details circle NED-312 K4 on enclosed inquiry slip

ROOF VENTILATOR
fan starts if fire is detected

This automatic Pyrovent roof ventilator not only serves to keep plant air clean, but becomes an escape valve for smoke, heat and gases in case of fire or explosion. Unit includes a fan, exhaust stack with damper flaps and an electric thermostat for detecting fire. If fire occurs, fan starts automatically when rate of temperature rise exceeds 15° per minute, or when thermostat limits are reached. In case of power failure, damper flaps open automatically to provide vent for smoke and gases. Fan and dampers are powered by individual motors and controlled by start and stop pushbuttons. Units are made in 24 to 72-in. fan diameters in direct and belt driven types by **Harvey P. Bertram Co.**, Dept. D, 561 Reading Rd., Cincinnati 2, O.

For more details circle NED-315 K4 on enclosed inquiry slip

HYDRAULIC POWER PUMPS
deliveries from 440 to 1120 cipm at drive speeds from 710-1750 rpm



Variable speed straight line and rotary drive applications requiring 1 to 3 hp under precise speed or pressure control are served by line of one and two-way pumps whose deliveries range from 440 to 1120 cu in./minute at drive speeds from 710 to 1750 rpm. Continuous working pressure is 1140 psi. Typical application for type AE-311 unit shown is as drive on stokers, small extractors, paper cutters, forging machines, cable wrappers, winders, proportioning pumps, reels, extruders, cutters and conveyors.

Each pump package incorporates a high pressure, radial piston pump with flat valve; low pressure gear pump; one of eight standard controls; three-way suction and return valve for differential systems, dual disk check valves for nondifferential systems; double-acting high pressure relief valve; and a gear pump relief valve. Pump can be mounted on reservoirs integral with machines or furnished with oil reservoirs for mounting both pump and electric drive motor. Made by **Oilgear Co.**, 1561C W. Pierce St., Milwaukee 4, Wis.

For more details circle NED-316 K4 on enclosed inquiry slip

production flows smoothly...
at top speed, at all times, yet free of rejects

Kester makes 62 different fluxes to meet any requirements. Why not write our Technical Department for full information?

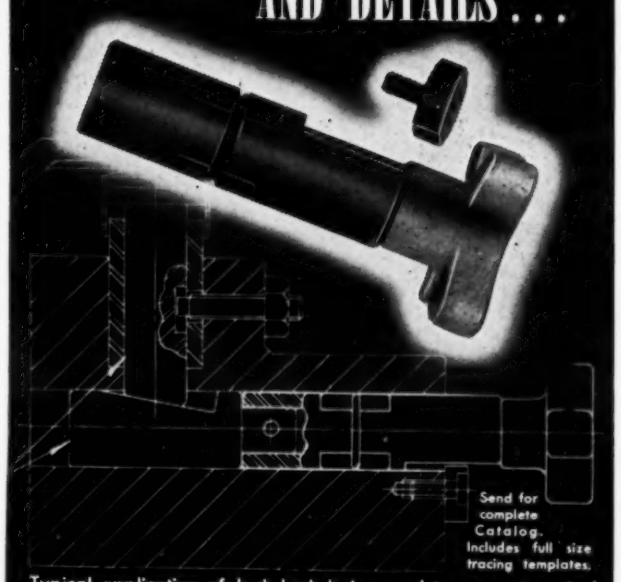
KESTER SOLDERING FLUX

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, N. J. • Brantford, Canada

KESTER SOLDER

For more details circle NED-313 K4 on enclosed inquiry slip

Morton FIXTURE CLAMPS AND DETAILS...



Send for complete Catalog. Includes full size tracing templates.

Typical application of Jack Lock being used to support section of casting during machining operation. This is one of the numerous applications of this positive, vibration proof, non-distorting Jack Lock.

MORTON MACHINE WORKS
2421 WOLCOTT STREET • DETROIT 20, MICHIGAN

For more details circle NED-314 K4 on enclosed inquiry slip

NEW COMPACT POWERFUL

Quiet!

ELECTRIC VIBRATOR

To speed the flow of stubborn material from hoppers, bins and chutes of all sizes and shapes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-317 K4 on enclosed inquiry slip

THE TACHOMETER THAT REQUIRES NO MAINTENANCE
• IT'S ACCURATE
• EASY TO USE

(MEASURING 3100 RPM)
... AND SAFE
... NO CONTACT WITH MOVING PARTS

THE FRAHM® RESONANT REED TACHOMETER requires no contact with moving parts—simply touch it to the case or frame of the machine under test and read directly in rpm. No wearing parts—No oiling—Cannot overspeed.

IDEAL FOR PRODUCTION TESTING where quickness and accuracy count. Bench mounted with stimulator rods the Frahm Tachometer becomes a time and money saver for inspecting hand power tools, electric shavers and cleaners, etc. Investigate the many advantages of these unique and simple instruments. *Write for Bulletin 31-D*

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-318 K4 on enclosed inquiry slip

Another Adhesive Problem Solved with Pliobond

TOP BONDING JOB on this battery tester is obtained easily and economically with PLIOBOND. Photo courtesy of Hickok Electrical Instrument Company, Cleveland, Ohio.

CHEMICAL GOODYEAR DIVISION

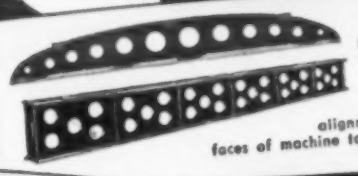
Only one that does the job—is what Hickok Electrical Instrument Co. says of PLIOBOND, the thermoplastic adhesive that "bonds anything to anything." They use it to cement the hard rubber cover to the baked enamel on the metal casing of their complete, automotive battery tester. Applied cold, PLIOBOND is the only adhesive of the many tested that gives them a tight, water-resistant bond, strong enough to endure hard, service-station usage in all kinds of weather. For details on PLIOBOND, write Goodyear, Chemical Division, Akron 16, Ohio.

Pliobond—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-319 K4 on enclosed inquiry slip

WORK MATES TO MORE EFFICIENT PRECISION CRAFTSMANSHIP

CHALLENGE
SURFACE PLATE EQUIPMENT
• HIGH GRADE SEMI-STEEL
• HEAT TREATED • PRECISION GROUND



STRAIGHT EDGES—For scraping planer and lathe bed ways . . . parallel straight edges for inspection of alignment and bearing surfaces of machine tools.

UNIVERSAL BOX ANGLES Combines the clamping facilities of an angle iron, the stable accuracy of a box parallel with the perpendicular flat surface of an angle plate.

ANGLE PLATES—Made in 22 sizes from 2¾ x 4¾ x 4¾ up to 24 x 24 x 24 for clamping and holding work.

V-BLOCKS — Feature ribbed sides, light weight and a V accuracy of .0005 inch . . . for supporting shafts for drilling, checking, etc.

BOX PARALLELS Complete range of sizes for every use . . . Accurate to .0005 inch.

THE CHALLENGE MACHINERY CO.
Office, Factories and Show Room: Grand Haven, Mich.
Challenge TRADE-MARK ®
Over 50 Years in Service of the Graphic Arts
DEALERS IN ALL PRINCIPAL CITIES

For more details circle NED-320 K4 on enclosed inquiry slip

Assure positive air control with Schrader check valves

Check valves can deliver the correct cycle in a pneumatic control—or any of a hundred different uses.

Air can flow in one direction only through a Schrader Check Valve. Positive sealing action and long service are assured by the large seating area between the metal check and an oil resistant washer. All metal parts are brass, or are heavily plated.

Details on Schrader Check Valves and all Schrader Air Control Products are in the Schrader catalog. Send for your copy today.

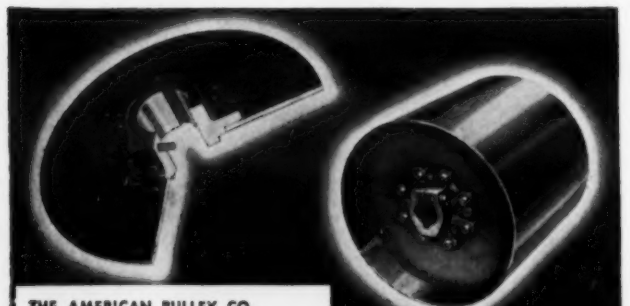
A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. E-46, Brooklyn 38, N. Y.

For more details circle NED-321 K4 on enclosed inquiry slip

NEW PULLEY DESIGN MEANS LONGER LIFE, LOWER COSTS, LESS MAINTENANCE

The new design American Pulleys are the best friends a conveyor belt ever had. They're easier to install, built to take the severest kind of service, and cost next to nothing to maintain because they are fully dirt- and splash-proof. Size for size, they will outwear, outwork any other pulleys made.

New Type "HD" Pulley features the Wedg-Tite Hub, a special interchangeable split-tapered design which combines maximum strength with minimum weight to give the greatest shaft grip ever developed in a conveyor pulley. Two other types—Type "L" for light and medium duty, and Type "O" a steel split model—round out the new line to cover all types of service. See your distributor or write today for full information. There is no obligation.



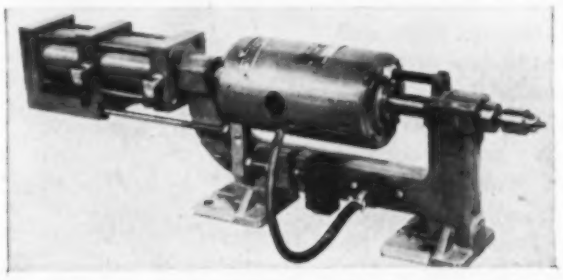
THE AMERICAN PULLEY CO.
4294 Wissahickon Ave.
Philadelphia 29, Pa.
Please send full information on the new American Conveyor Pulley Line.
Name
Company
Address
City Zone State

Power Transmission by
AMERICAN PULLEY COMPANY
At the Profit End of the Machine

For more details circle NED-322 K4 on enclosed inquiry slip

AUTOMATIC DRILL UNIT mounts in any position and handles 0.004 to ⅛-in. drills

A larger cylinder is used in improved model 111 automatic drill unit, and both it and hydraulic resistance unit are now mounted in line with the spindle.



Free travel is accomplished in hydraulic system to eliminate hammering. Unit will perform high production drilling from 0.004 to ⅛-in. diameter, and for light materials up to ¼-in. Spindle feed and speed are under separate control for any combination of feed to speed.

A ⅛-hp universal electric motor powers spindle in either of two available speed ranges from 1000 to 10,000 rpm, or 2500 to 15,000 rpm. Drill speed is set by control lever on spindle speed scale. Rapid advance to work, proper rate of feed through the job, positive depth stop and snap withdrawal are among features. Made by **Electro-Mechano Co.**, 263 E. Erie St., Milwaukee 2, Wis.

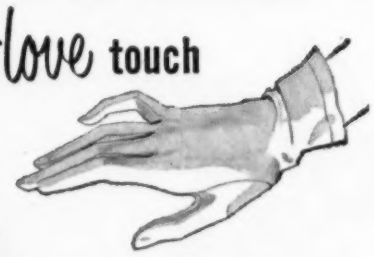
For more details circle NED-323 K4 on enclosed inquiry slip

ROTARY SNOW PLOWS handle 600 and 1200 lb per minute

Any type snow from light and fluffy to heavy, wet or sticky can be removed by SA series rotary snow plows. Rotor slices and breaks snow, keeping it in constant free movement and casting it from 20 to 25 ft in any desired direction or elevation through revolving casting chute. Model SA-20 is 20 in. wide and will throw up to 600 lb of snow per minute, while 26-in. wide model SA-26 has capacity of 1200 lb per minute. Both are self-propelled by Kohler four-cycle air cooled engines, rated 3½ hp for the 20-in. and 6½ hp for the 26 in. plow. Two forward speeds, a neutral position, positive roller chain drive and safety clutch with automatic overload safety trip are features. Made by **Wm. Bros Boiler & Mfg. Co.**, Dept. N, 1057 Tenth Ave. S.E., Minneapolis 14, Minn.

For more details circle NED-324 K4 on enclosed inquiry slip

...Give fragile products the Kid Glove touch with new Colson® Pneumatic Casters



These new plate type casters with 8" or 10" pneumatic or 6", 8" or 10" semi-pneumatic tires are ideal for cushioning the ride over rough, bumpy floors.

All steel parts are 3/16" thick; heat-treated kingpin is 7/8" diameter; heavy duty double ball bearing swivel construction. Rigid and swivel fork models available

Write us or consult the yellow pages (under "casters") for the COLSON office near you.

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • HAND TRUCKS • LIFT JACK SYSTEMS
Hydraulic, Electric and Mechanical Power Lifts and Transports

For more details circle NED-325 K4 on enclosed inquiry slip

REED DU-ALL CHAIN WRENCH

Turns Any Shape . . .
Works where an ordinary wrench won't!

This new REED wrench does everything a conventional pipe wrench will do, plus a great deal more. It gets into tight corners, close to baseboards or between parallel pipe lines and holds round, square or irregular shapes firmly, without "play" and without crushing. Its fast, ratchet action lets you turn either way from either side. You can tighten and "back-off" without taking the wrench from the pipe. 14", 18" and 24" lengths.

Ask your distributor or write for literature.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA • U. S. A.

For more details circle NED-326 K4 on enclosed inquiry slip

5 good reasons why CLARKE is your best buy

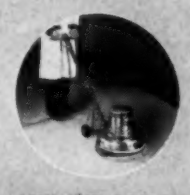
HEAVY DUTY MOTOR delivers power to wade through toughest jobs such as steel wooling wet floor seal, disc sanding.

Wet scrubbing at low cost. Clarke Wet-Dry Vac picks up solution.

PRECISION DRIVE features planetary gear system; quiet, efficient.

FULLY ADJUSTABLE HANDLE has locking device. Wheels flip up automatically.

AUTOMATIC DUAL SWITCH has high overload capacity. Operates with either or both hands.



ADVANCED DESIGN provides perfect balance. Machine runs itself, operator guides it.

Look at Clarke's features and then try a Clarke yourself! See how easily a Clarke floor maintainer scrubs, waxes, polishes, steel wools, disc sands, grinds, and safely shampoos rugs and carpets.

Physical effort and costs are cut to a minimum. And — best of all — your floors are CLEAN, easy to keep safe and bright.

There's a Clarke floor maintainer sized for your job and budget, and a choice of six heavy duty wet-dry vacuums to complete an unsurpassed cleaning team.

Ask for a demonstration now.

Your Copy FREE! Write today for colorful, 22-page "Your Floors and How to Care for Them."

Clarke

SANDING MACHINE COMPANY
2210 E. Clay Ave.,
Muskegon, Mich.

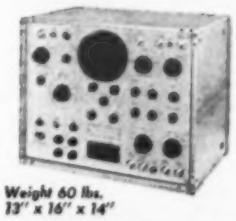
Authorized Sales Representatives and Service Branches in Principal Cities

Distributed in Canada:
Clarke Vacuum Cleaners:
G. H. Wood & Co., Ltd.
P. O. Box 34, Toronto 14, Ont.
Clarke Floor Maintainers:
Strongridge Ltd.
124 Weston St., London, Ont.

For more details circle NED-327 K4 on enclosed inquiry slip

THE LAB PULSESCOPE® BY WATERMAN

MODEL S-5-A



Weight 60 lbs.
13" x 16" x 14"

Video amplifier up to 11 mc . . . Video Delay 0.55 μs . . . Pulse rise and fall time better than 0.1 μs . . . Video sensitivity 0.1v p to p/in. . . . Sweep 1.2 μs to 120,000 μs with 10 to 1 sweep expansion . . . Sweep triggered or repetitive . . . Internal markers synchronized with sweep from 0.2 μs to 500 μs . . . Trigger generator with output available externally . . . Built in precision amplitude calibrator . . . Combination case . . . Operates on 50 to 1000 cycles at 115V AC.

Another Waterman first, a compact, portable wide band pass laboratory oscilloscope with markers that are triggered in synchronism with the incoming signal. Ideal for pulse measurements, such as shape, amplitude, duration and time displacement. S-5-A LAB PULSESCOPE is adaptable to all kinds of electronic work where knowledge of circuit performance is essential. Built in Video delay permits observation of leading edge of triggering pulse. Precision means of amplitude calibration are provided. Sweep can be either repetitive or trigger with 10 to 1 expansion when desired. Internally generated markers, together with Video calibration, provide quantitative data of amplitude, shape, duration and time displacement of pulses. The oscilloscope thus is truly a PULSESCOPE, another Waterman first.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA.
CABLE ADDRESS: POKETSCOPE

WATERMAN PRODUCTS INCLUDE:

S-4-A	SAR	PULSESCOPE
S-5-A	LAB	PULSESCOPE
S-10-B	GENERAL	POCKETSCOPE
S-11-A	INDUSTRIAL	POCKETSCOPE
S-14-A	HIGH GAIN	POCKETSCOPE
S-14-B	WIDE BAND	POCKETSCOPE

Also RAKSCOPES, LINEAR AMPLIFIERS, RAYONIC TUBES and other equipment

WATERMAN PRODUCTS

▲ For more details circle NED-328 K4 on enclosed inquiry slip ▲

the Solution to your Big Problem is often *a little different*

SET SCREW

Send for bulletins on these special set screws made by set screw specialists who have 20 years' experience with problems similar to yours.

Improved ZIP-GRIP* For holding locking action at any point! Resist vibration.

FLUTED Meet Federal Standards. Furnished with any type point.

OFF-SET Locking Where slotted screws are preferred. Spring locking action.

NU-CUP* 42% sharper angle than regular cup point. Give greater holding power.

For complete general set screw data send for new Catalog No. 19, or, check product in which you are interested; write name and address in page margin and mail.

*Patent applied for

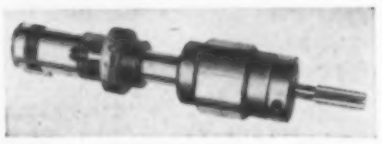
Set Screw & Mfg. Co.

130 Main St., Bartlett, Ill. (Chicago Suburb)

We Specialize in Solving Puzzling Set Screw Problems

▲ For more details circle NED-329 K4 on enclosed inquiry slip ▲

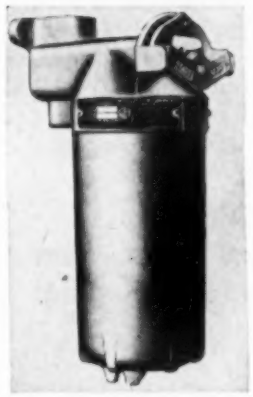
ADJUSTABLE TORQUE DRIVER for lead screw tapping



Tap breakage is minimized in lead screw tapping operations by this releasing driver. Spring-loaded shank compensates for variations between feed of spindle and lead of tap. Adjustable-torque clutch mechanism assures complete release, eliminating friction, wear and impact action. Roller drive provides free-wheeling releasing action, protects threads and prevents torque setting changes due to friction and heat. Release is preset according to tap strength limits. Increase in tap life can go as high as 500 per cent. Made by **Scully-Jones & Co.**, 1952 S. Rockwell St., Chicago 8, Ill.

▲ For more details circle NED-331 K4 on enclosed inquiry slip ▲

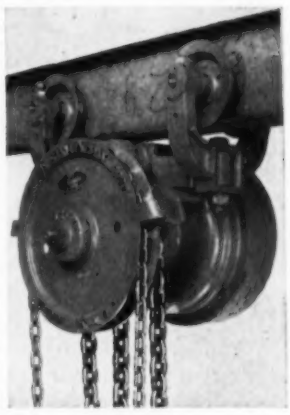
MOTOR RESTART DEVICE operates after 2, 4, or 6-second delay



Explosionproof and dust-tight type OFC Condulet can be set to restart motors which have stopped because of low voltage or voltage failure within time limits of 2, 4 or 6 seconds. Automatic device is available for 110-v power standard, but can be supplied with transformer for 220, 440 or 550 v. Body of device has vertical feed-through hubs for threaded conduit, one of which has removable pipe plug for dead-end or through-feed wiring. Made by **Crouse-Hinds Co.**, 7 North St., Syracuse, N. Y.

▲ For more details circle NED-332 K4 on enclosed inquiry slip ▲

CHAIN HOIST & TROLLEY in 1, 1½ and 2-ton capacities



Combined hoist and trolley developed for operations involving restricted headroom and short radius curves is available in capacities of 1, 1½ and 2 tons. Unit consists of standard Reading multiple gear chain hoist which is attached to special load bar on swivel type trolleys. Cast steel trucks have ball bearing wheels running on hardened steel axles. Made by **Reading Crane & Hoist Corp.**, 2105 Adams St., Reading, Pa.

▲ For more details circle NED-333 K4 on enclosed inquiry slip ▲

FREE! New J-M "packing selector"

. . . to help you find the right packing in a hurry

Why take chances with "any old packing" and run the risk of shutdowns and the expense of frequent replacements?

This handy new "packing selector" tells you at a glance the *right* Johns-Manville packing or gasket for practically any power plant application. Its recommendations are based on the experience of J-M engineers in solving packing problems and lowering packing costs in thousands of plants.

For your free copy, write Johns-Manville, Box 60, New York 16, N. Y. Ask for "Packings for the Power Plant."

JM Johns-Manville PACKINGS & GASKETS

▲ For more details circle NED-334 K4 on enclosed inquiry slip ▲

How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier . . . Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

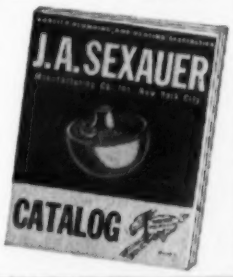
Built like a tire with Fiberglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with Fiberglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog H. Fill in and mail the coupon today.



J. A. Sexauer Mfg. Co., Inc. Dept. AU-104
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your FREE, new 118 page Catalog H.*

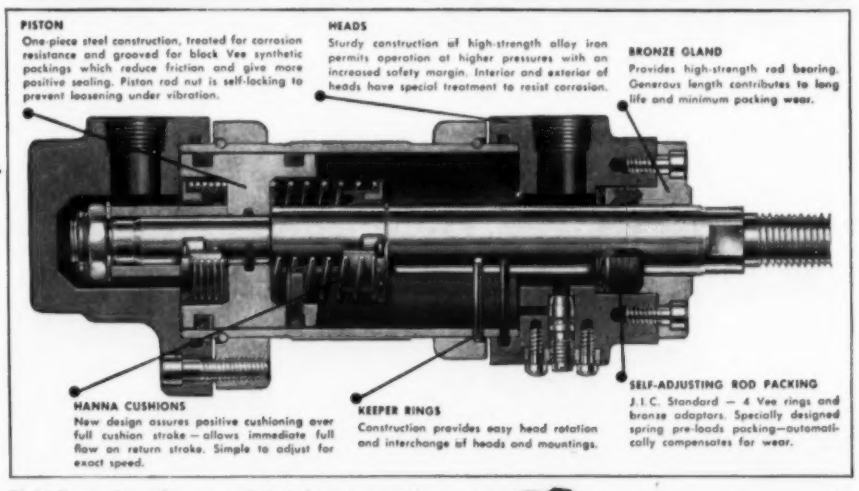
My name.....Title.....
Company or Institution.....
Street.....
City.....Zone.....State.....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

▲ For more details circle NED-335 K4 on enclosed inquiry slip ▲

Completely New in DESIGN and ENGINEERING

HANNA *Fluid Power* 750 SERIES CYLINDERS



■ We didn't design these cylinders with a "new look" in mind — although they have it. What's most important to you is their new performance . . . new operating features . . . new versatility. The cross-section points out just some of the new features. Others are: ground, polished, chrome-plated rods of alloy steel; cold drawn brass cylinder tubes; cushion adjustment dials; large fluid passages; and J.I.C. Standard leak-proof "O" ring gaskets.

You will like the greater power developed from dimensionally smaller units in the Hanna "750" Fluid Power line. Because of their broad capacity range, air up to 250 psi and hydraulic up to 750 psi, you'll be sure of smooth, dependable and lasting operation in the medium pressure ranges.

Inside and outside, Hanna "750" Fluid Power Cylinders are truly new. Together with their proved companions, Hanna LP and Hanna HP Cylinders, they offer a complete range of capacities, sizes and mounting styles to suit your requirements. For details, ask your Hanna Representative (see your classified telephone directory), or write for the new Catalog. No obligation.

Write for this new Hanna Catalog No. 750

Hanna Engineering Works
1759 Elston Avenue - Chicago 22, Illinois

▲ For more details circle NED-330 K4 on enclosed inquiry slip ▲

SAVE TIME—STEPS—MATERIALS with HANSEN ONE-HAND TACKER

Hansen Model T-4 fastening screens in radio-phono-TV

TAKE HANSEN TACKERS TO THE JOB! Hold materials with one hand. Tack them with the other. Fast operation — flexibility in use — easy portability — are combined in Hansen balanced-design. Self-contained for instant use.

Screens in radio-phono-TV — rubber dies to printer-slotter — plywood — insulation — metal lath — door and window screens — a few of thousands of every-day Hansen-tacked jobs.

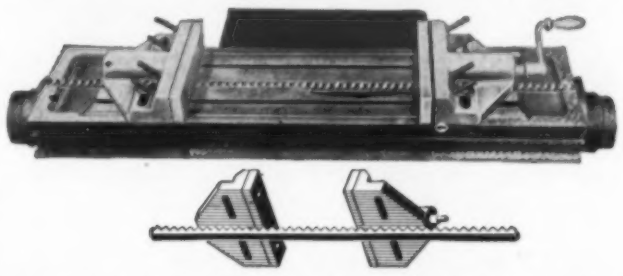
A. L. HANSEN MFG. CO. REQUEST BOOKLET

5164 RAVENSWOOD AVENUE, CHICAGO 40, ILL.

▲ For more details circle NED-337 K4 on enclosed inquiry slip ▲

MACHINE TOOL VISE
opening limited only by table length

Two jaws of this machine tool vise mount on the machine table at any opening width. They are prevented from slipping when pressure is applied by a



tie bar that fits into the table T-slot and engages teeth in the bottom of each jaw. Opening of jaw is limited only by length of the slotted machine table. Work can be held by conventional tightening of one screw jaw or by removing two steel jaw plates and installing cone point hold-down bolts. Each jaw is provided with two keys that fit into the T-slot to insure proper alignment. Jaws are 2½ in. high and 8⅞ in. wide. Standard tie bar will fit slots over ½-in. wide and is 36 in. long, with special lengths made up to 72 in. Made by **Universal Vise & Tool Co.**, Parma, Mich.

▲ For more details circle NED-339 K4 on enclosed inquiry slip ▲

HIGH VOLUME WHITEPRINTER
makes 1000 letter size copies/hour of practically any type of original

Exact copies of office forms, letters, diagrams, charts or any translucent original whether typed, written, drawn, printed or photographed can be produced by the Copymaster ammonia-dry whiteprinter. Rate for letter-size copies is 1000 per hour, and blackline or colored line whiteprints can be made. Width capacity is 20 in. plus, for cut sheets or roll stock in any length.

Synchronized printing and ammonia-dry developing speed is up to 30 fpm with manual operation. Electronic drive provides instant and continuously variable speed change. Controls for full stop and reversal and for changing temperature in evaporating chamber are provided. Floor and table models are available. Operation is on 115-v 60-cycle ac. Distributed by **P & H Sales Corp.**, Dept. NED, 5650 N. Western Ave., Chicago 45, Ill.

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ROLLS WITH THE PUNCH!

THE TOTE BOX TRUCK

Like any top quality "boxer," George, the almost automatic truck, takes tough toting tasks with ease. Note the leverage handle hook that engages metal-laden boxes . . . glides them over beveled edge of truck onto upper rollers . . . holds them safely. Lower set of traction rollers carry the truck to destination with little effort. Women operate them without danger of strain. No lifting, no tugging. Low-cost, long, rugged service life. Brilliant paint job is safety factor. Try one unit . . . you'll want more. Details on request.

LET "George" DO IT

*TRADEMARK

Write for free folder N

ROLOCK Inc. • Fairfield, Conn.

3RG54B

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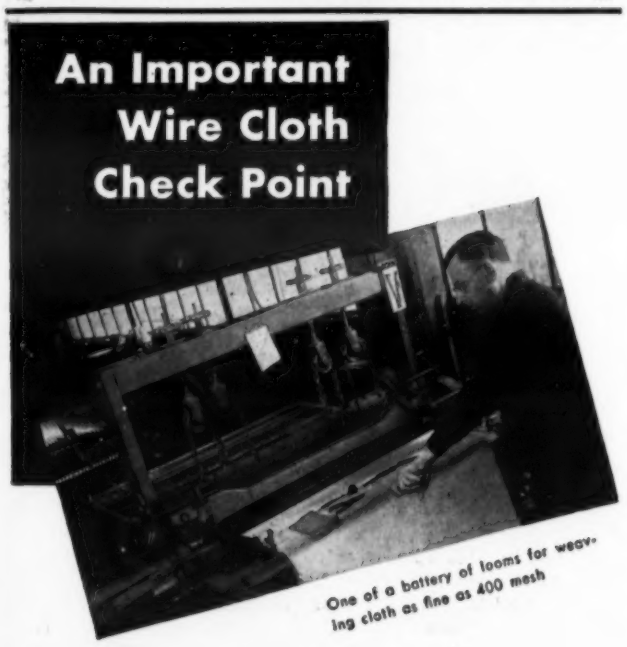

One of a battery of looms for weaving cloth as fine as 400 mesh

Weaving Precision

Our skilled workmen and precision looms combine to make precision wire cloth that meets the most rigid specifications. All shute wires are parallel and all warp wires are parallel as they must be, to assure a uniformly woven cloth with no defects. One or two open spots in a wire cloth could completely spoil the most painstaking screening operation.

In addition to its uniformity and freedom from imperfections, Newark Wire Cloth is noted for accurate mesh counts. Available in all the commercially used metals, Newark Wire Cloth is woven in sizes ranging from 4 inches (space cloth) down to 400 mesh.

We maintain a large stock of the commonly used metals and sizes, and are in a position to make prompt shipments. Let us quote on your requirements. When writing, please give us details on your process.

Send for our New Catalog E.

NEWARK for ACCURACY

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

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How Jo-Block Accessories Save Special-Gage Costs

Johansson Gage Blocks and Accessories can be quickly assembled into actual working gages that perform hundreds of high-accuracy measurements. Used as "Go"—"Not Go" gages, trammels, height gages, etc., they keep gage construction costs at a minimum . . . assure precision standards at every stage of manufacture.

Brown & Sharpe Jo-Blocks are available singly or in sets—for use as laboratory or working standards. The many Accessories extend their use to almost limitless applications. Write for Catalog. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

BUY THROUGH YOUR LOCAL DISTRIBUTOR

Brown & Sharpe BS

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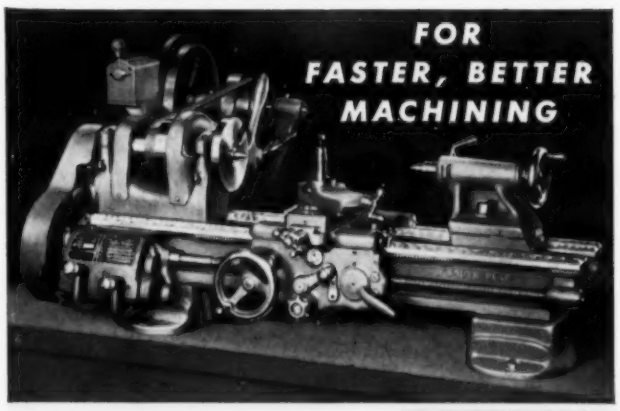
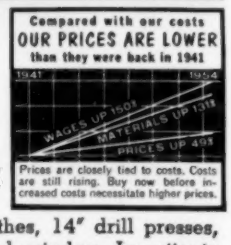
SOUTH BEND
9" PRECISION LATHES





South Bend 9" lathes are built to produce faster and do better machining. We believe that no other lathe of comparable size and price can meet the requirements of industry as well. A South Bend 9" will handle efficiently all your small precision jobs. Prices in the 9" series start at $211.00, f.o.b. factory. We also manufacture larger lathes, 14" drill presses, 7" bench shapers and 8" or 10" pedestal grinders. Investigate South Bend machines today! Write for your catalog.

SOUTH BEND LATHE

SOUTH BEND 22, IND. • *Building Better Tools Since 1906*

▲ For more details circle NED-341 K4 on enclosed inquiry slip ▲

This FAN-COOLED Worm Gear Drive

This white area shows space Speedaire saves you over conventional drive.

Delivers up to Double the Horsepower of Standard Worm Units of Equal Frame Size

SAVES WEIGHT • SPACE • MONEY

Speedaire design moves air at high velocities to increase rate of heat dissipation. This and other modifications give Cleveland's Speedaire worm gear speed reducer a much greater load-carrying capacity. As a result, a Speedaire is capable of doing the job of a much larger conventional unit.

FREE DESIGN DATA

Speedaire units handle loads from approximately 1 hp to 143 hp. Catalog 400 gives detailed design information and typical applications. Write for free copy *today*. The Cleveland Worm & Gear Co., 3283 East 80th Street, Cleveland 4, Ohio.

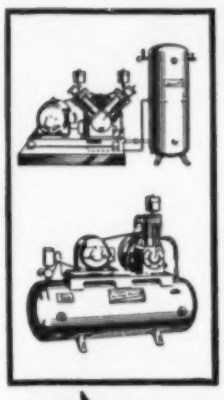
CLEVELAND WORM GEAR *Speed Reducers*

Affiliate: The Farval Corporation, Centralized Systems of Lubrication

▲ For more details circle NED-344 K4 on enclosed inquiry slip ▲

MORE FREE AIR PER HORSEPOWER

Kellogg-American



AIR COMPRESSOR PUMPS, ⅓ TO 20 HP
Engineered and precision built to give more *free air* (actual air delivered) per hp, Kellogg-American compressors assure maximum air delivery, efficiency and service life. Single or two stage, 1, 2 or 4-cylinder units available for pressures up to 200 psi; displacements to 105.9 c. f. m.

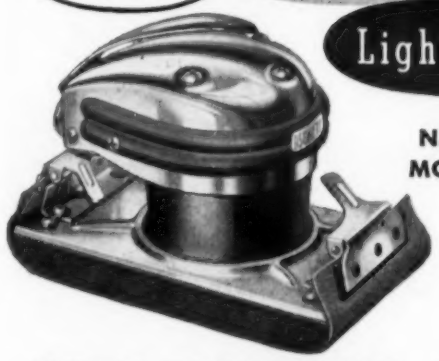
COMPLETE AIR COMPRESSORS, ⅓ TO 20 HP
Portable or stationary; skid, remote tank or tank mounted; electric motor or gas-engine-driven models permit you to select the most efficient, economical compressor for every job. Write Dept. ND-1 for Bulletin K-307.

FREE New slip-stick selector to help determine the right Kellogg-American air compressors for your needs. Send for yours on company letterhead today.

KELLOGG DIVISION
ROCHESTER 9, N. Y.
AMERICAN Brake Shoe COMPANY
Kellogg-American
⅓-20 H P AIR COMPRESSORS · PAINT SPRAY EQUIPMENT

For more details circle NED-345 K4 on enclosed inquiry slip

Fast POWERFUL Lightweight



NATIONAL MODEL 400

CUTS FINISHING COSTS!

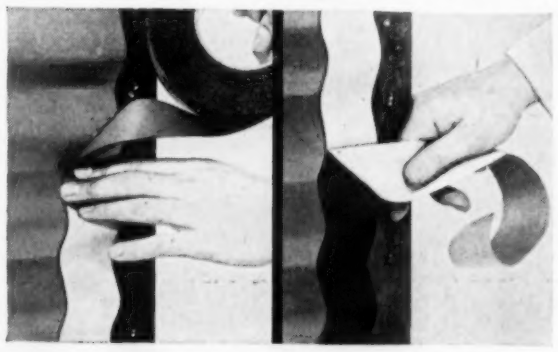
National Sanders are made for tough use on production lines. Properly used, they will cut sanding time up to 75% over hand sanding . . . reduce operator fatigue . . . and, at the same time, produce a better finish. These lightweight, vibrationless block sanders can be used on wood, metal, plastic, felt, stone, and other surfaces. Write for more information today.

NATIONAL NS SANDERS

NATIONAL AIR SANDER, INC.
2818 AUBURN ST., ROCKFORD, ILL.

For more details circle NED-346 K4 on enclosed inquiry slip

NEW watertight seal!



for metal edges, corners, surfaces

Here's a new 3M product that can provide a watertight seal wherever two pieces of metal meet. It's EC-1202, made of synthetic rubber ribbon, reinforced with sturdy fabric for extra strength. It's easy to apply, too. Widths range from ¼" to 2" in ¼" increments. Available in rolls of 100' (¼" thick) and 200' (½" thick).

For details, write 3M, Dept. 810, 417 Piquette Ave., Detroit 2, Michigan.

3M COMPANY
MINNESOTA MINING AND MANUFACTURING COMPANY
ADHESIVES AND COATINGS DIVISION

see our catalog in PRODUCT DESIGN FILE or write for copy

For more details circle NED-347 K4 on enclosed inquiry slip

PORTABLE JET CLEANER cleans parts and machinery

Rapid cleaning of motors, compressors, condensers, machinery and small parts without dismantling can be done effectively with model 111 Steam Kleen jet sprayer. Steam jet is operated by finger-tip control. Instantaneous changeover from wet to dry steam is accomplished by tilting unit from horizontal to vertical position. Sprayer weighs 16 lb, holds ½-gal of water and can be brought to operating temperature and pressure in 20 minutes using cold water. It is electrically heated, thermostatically controlled, has safety valve and operates on 110 and 115 v. Unit complies with ASME miniature boiler code. Made by **Henry Flow Control Co.**, North & Hawthorne Aves., Melrose Park, Ill.

For more details circle NED-348 K4 on enclosed inquiry slip

PORTABLE GRINDER WHEELS have built-in safety rings

Resinoid bond high speed wheels for portable grinders have Grind-Away safety rings embedded directly in the usable part of the wheel. Rings have approximately the same tensile strength as steel. Since they abrade away as wheels are used, they do not interfere with the grinding operation. Feature is presently available in straight wheels and in type 11 cups. Latter have both rim and back reinforced. Made by **Colonial Abrasive Products Co.**, 601 Harry St., Conshohocken, Pa.

For more details circle NED-349 K4 on enclosed inquiry slip

DIAPHRAGM VALVES for corrosive or abrasive service

Designed primarily for shut-off, throttling and control of acids and chemicals in corrosive or abrasive service, X-V series diaphragm valves includes various alloy constructions as well as different types of linings to suit service. Generous size body areas and oversize ports assure high capacity and low pressure drop. Design provides for ease of maintenance, replacement of parts and secure closure even with gritty fluids. Suitable for pressures to 150 psi as well as vacuum, valves have easy-to-read position indicator. Sizes range from ½ to 4 in. with flanged, screw or union connections. Made by **Farris Flexible Valve Corp.**, 551 Commercial Ave., Palisades Park, N. J.

For more details circle NED-350 K4 on enclosed inquiry slip

NEWLY DESIGNED TRAP

virtually eliminates maintenance!

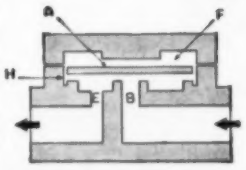
Most striking feature of this trap is its simple design. Only one moving part—a solid stainless steel disc—virtually eliminates maintenance.

The trap is small, easily installed, immune to water hammer, vibration and corrosive elements. Uses same valve seat and head for all pressures to 600 psi and temperatures to 950°F.

Check these advantages to your own satisfaction. Write today for a 60-day trial giving size, capacity and pressure conditions.

SARCO COMPANY, INC.
EMPIRE STATE BLDG., N. Y. 1, N. Y.

SARCO *Thermodynamic* TRAP



HOW IT WORKS!
Air and/or condensate raise valve seat disc A, discharge thru E. When steam follows, greater velocity causes it to strike body at H thus building up pressure in chamber F. This causes disc to seat, closing tube B. As pressure in F decreases by condensation, pressure in tube B raises disc and cycle is repeated.
2099-F

For more details circle NED-351 K4 on enclosed inquiry slip

One Pipe Sealing Compound For All Services

For your convenience: available in handy 1-lb. brush top cans

JOHN CRANE PLASTIC LEAD SEAL

Air	Natural Gas
Anhydrous Ammonia	Petroleum Products
Chemical Solutions	Refrigerants
Distillates	Steam
LP Gas	Water

Fine or coarse threads • Gaskets
Temperatures to 500°F. Pressures to 6000 psi.

PLASTIC LEAD SEAL NEVER HARDENS— lasts for the life of the connection—won't crack due to vibration, contraction or expansion—permits easy disassembly, even after years of service.

Available in 1, 5, 15, 28 or handy 1-lb. brush top cans.

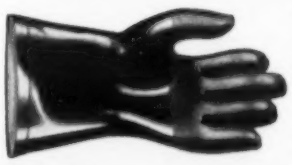
Order a trial can today. Crane Packing Company, 1811 Cuyler Avenue, Chicago 13, Illinois.

JOHN CRANE CRANE PACKING COMPANY
In Canada: Crane Packing Co., Ltd., 617 Parkdale Ave., N., Hamilton, Ont.

For more details circle NED-352 K4 on enclosed inquiry slip

Edmont Case No. 504: Handling 1 to 2 lb. castings in hot caustic solution treatment. Ordinary plastic coated gloves had to be replaced after 1½ to 2 shifts. **Job-fitted** Edmont gloves lasted through 6 shifts — 3 to 4 times longer.

Job-fitted gloves wore 3 times longer



No. 932
Heavy duty Neox coated

In case after case, in all types of industry, Edmont **job-fitted** gloves, made of coated fabric, have widely replaced canvas, leather and unlined rubber gloves. Records prove they give 3 to 10 times longer wear, improve safety and work output. Cost savings of 40% to 70% are usual.

No. 360
Palm coated plastic (Durox)

Edmont Case No. 472: Feeding oily sheet steel into shear, metal furniture plant reports leather palm gloves wore only 4½ hours, were cleaned and re-issued every 1½ hours. Edmont palm coated Monkey Grip gloves lasted 16 hours.

No. 60W
Palm coated rough finish natural rubber

Edmont Case No. 293: Pulling condenser tubes, cotton gloves lasted only one hour. Edmont palm coated Grab-it gloves gave 6 hours service.

Edmont Case No. 531: Handling steel sheets on shearing table. Old-fashioned fabric gloves gave out in 4 hours. Modern **job-fitted** coated gloves lasted 15 hours.

Free Test Offer: Let us help you fit the correct gloves to your jobs. Send a description, on your letterhead, of your operations, materials handled and temperature conditions. Without cost we will recommend and forward samples of gloves, for job-testing. Our laboratory also develops special gloves to meet special conditions.

Edmont Manufacturing Co., 1240 Walnut St., Coshocton, Ohio

World's largest maker of coated industrial gloves, available through leading industrial suppliers.

Edmont

Edmont job-fitted gloves

For more details circle NED-353 K4 on enclosed inquiry slip

A Stockroom You Can Build Yourself!

SECTIONAL STACKBINS® give you the greatest flexibility and ease of installation ever devised for parts, tools, materials storage containers. You can set them up in minutes without tools! By combining bin sizes and number and size of openings, you get a storage system tailored to fit your particular needs. SECTIONAL STACKBINS give you maximum storage utility in minimum space. Available in 6 interstacking sizes.

For full information and prices, WRITE TODAY!

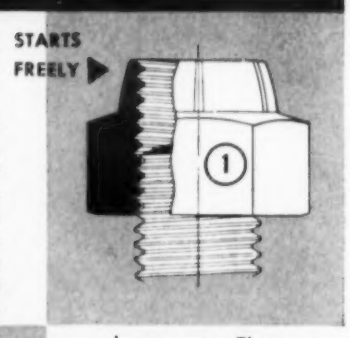
STACKBIN CORPORATION
1081 Main St., Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

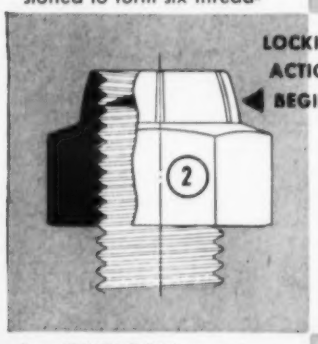
STACKBIN® SYSTEM "Stacked and Still Accessible"

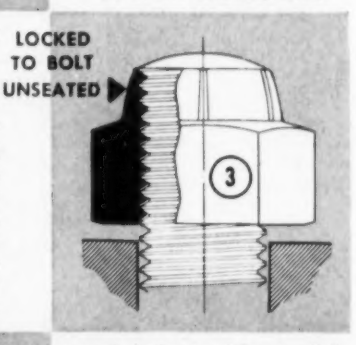
For more details circle NED-354 K4 on enclosed inquiry slip

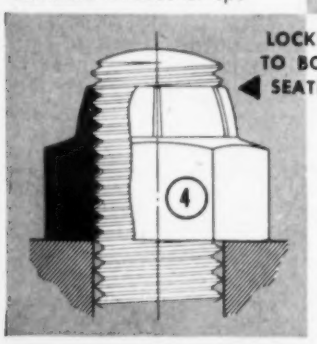
HUGLOCK self-locking nuts with prevailing torque.....

The accompanying illustrations, that were first used in our catalog published in 1944, tell the story of "HUGLOCK" self-locking nuts completely, almost without further explanation. It is a one-piece prevailing torque type, re-usable, self-locking nut. The tapered top portion of the nut is slotted to form six threaded segments. These are curved radially inwards to press against the bolt. This creates a heavy inward and downward pressure, producing a friction lock, between the load carrying flanks of the nut and the bolt threads. The combined metal to metal hugging and locking friction is distributed over all of the threads, enabling "HUGLOCK" to grip the bolt firmly, until removed by a wrench . . . The one-piece all metal construction and the continuous thread, extending through the length of the nut, provide maximum thread shear strength. The "HUGLOCK" principle can be incorporated into nuts of standard size, with standard threads or special sizes with special threads . . . "HUGLOCK" maintains its locking action, through repeated removals or re-use on the same bolt or a similar bolt of commercial thread tolerance. It locks to the bolt, whether the nut is seated or unseated. "HUGLOCK" eliminates axial thread play which tends to make a nut creep from its seat and work loose, under severe vibration or shock . . . All lock washers, cotter pins, key plates and other locking devices can be eliminated . . . The "HUGLOCK" section of our new catalog which is on the press, contains 24 pages. It includes complete information, specifications, engineering data and prices. It will be furnished upon request.









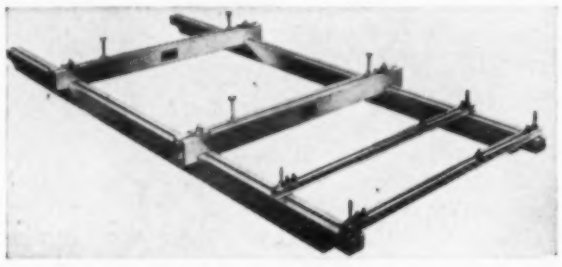
NATIONAL MACHINE PRODUCTS COMPANY 44231 Utica Road, Utica, Michigan

Manufacturers of standard and special hexagon nuts... "Huglock" and "Marsden" locknuts.

For more details circle NED-355 K4 on enclosed inquiry slip

ALUMINUM SHIPPING SKID made of standard components for handling heavy equipment

Assembled and disassembled in a few minutes, this lightweight extruded aluminum skid for handling and shipping heavy industrial machinery and equipment permits use of such handling equipment as lift jacks, lift trucks, cranes, rollers, dollies and casters. Skid beams are constructed with T-slots for standard nuts and bolts, permitting easy size adjustment. An accessory beam is available to secure separate motors, attachments and accessories.



Cross beams, accessory beams and anchor studs can be placed in any position without modification or drilling of holes. With load concentrated in middle of two runner beams, standard S-1 model will support a 6-ton load. As load is spread out from the center, capacity increases to 10 tons. Use of more beams further increases capacity. Made by **Harvey Machine Co.,** Harvey Aluminum Div., Dept. of Metallurgy, 19200 S. Western Ave., Torrance, Calif.

For more details circle NED-356 K4 on enclosed inquiry slip

HEAT-RESISTANT ALUMINUM PAINT withstands up to 1700° F

Improvement made in Heat-Rem H-170 high heat resistant aluminum paint results from combining nonleafing and leafing aluminum in the paint compound. Nonleafing particles remain suspended for uniform quantity of aluminum throughout the applied coat which withstands up to 1700° F temperatures. The leafing aluminum rises to surface upon application to form a bright, elastic finish that resists moisture, corrosion, mild acids, alkalies and industrial fumes. Also available in metallic red, blue and gold, paint can be used on heat lines, compressors, ovens, engine heads, mufflers and exhaust manifolds. Formulated by **Speco, Inc.,** Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

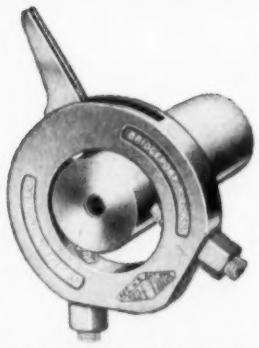
For more details circle NED-357 K4 on enclosed inquiry slip

NEW IMPROVED RED-E CAM ACTION GRINDER DOG

features

BRASS CAMS and BRASS SCREWS

to PROTECT THE SURFACE OF YOUR FINISHED WORK



Capacities ⅛" to 4"

Designed to save time and work — make rapid changes. Positive Grip *ALWAYS.* CAN'T MAR YOUR WORK! Steel Cams and Screws also available.

BUY FROM YOUR RED-E DISTRIBUTOR

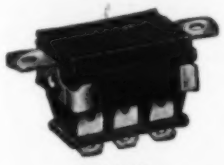
GRINDER DOG *Specialist since* 1908

RED-E-TOOLS READY TOOL COMPANY
561 Railroad Ave. • Bridgeport 5, Conn.

For more details circle NED-358 K4 on enclosed inquiry slip

FOR PUBLIC ADDRESS, RADIO, and kindred fields, specify JONES 400 SERIES PLUGS AND SOCKETS of *proven* quality!

P-406-CCT



S-406-AB

Double Contact Area

Phosphor bronze knife-switch socket contacts engage both sides of flat plug contacts.

Socket contacts phosphor bronze, cadmium plated. Plug contacts hard brass, cadmium plated. Insulation molded bakelite. Plugs and sockets polarized. Steel caps with baked crackle enamel. 2, 4, 6, 8, 10, 12 contacts. Cap or panel mounting.

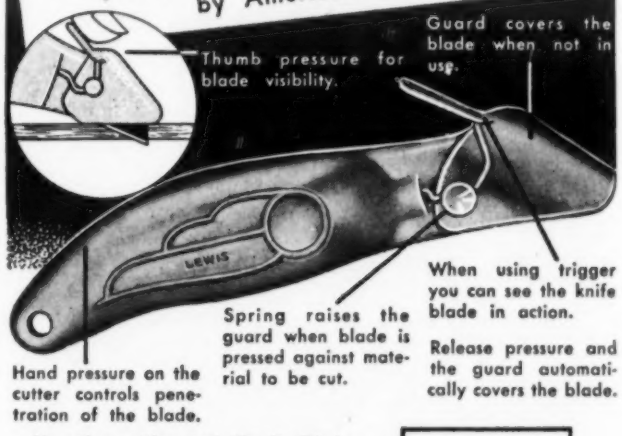
Information on complete line, in Jones Catalog 20: Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-359 K4 on enclosed inquiry slip

NEW! LEWIS AUTOMATIC TRIGGER ACTION SAFETY KNIFE

Quickly and Successfully Adopted for Use by America's Leading Concerns



No other cutting tool like it. Eliminates the hazards of exposed cutting blades. You must operate it to appreciate its swift and sharp cutting . . . always automatically ready for use. Trigger action gives full blade visibility with safety.

Retail Price $1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-360 K4 on enclosed inquiry slip

COSTLY WORK BENCHES NEED NOT BE A "NECESSARY EVIL" Investigate

INDUSTRIAL LAMINATED WOOD TOP BENCHES . . . still your best bench buy!

Nowhere else can you find a bench of such outstanding quality — with so many exclusive patented features — *for so low a price!* No other bench is so right for you for so many working needs. INDUSTRIAL BENCHES *last longer*...because they *stand up better*...made STRONG to begin with.

30 sizes and styles. *Send for complete catalog and prices.*

No. 1909

RIGID.... LOWER PRICED

24" wide, 5 foot long, 33 inches high.

Full laminated wood top made of selected hard maple on edge, 1¾" thick. All sections joined true and glued. Reinforced with concealed bolts. Tops finished, sanded and shellacked. Absolutely no bolts or screws protrude or show above top surface of bench.

IMMEDIATE DELIVERY. ORDER TODAY!

Distributor's inquiries invited

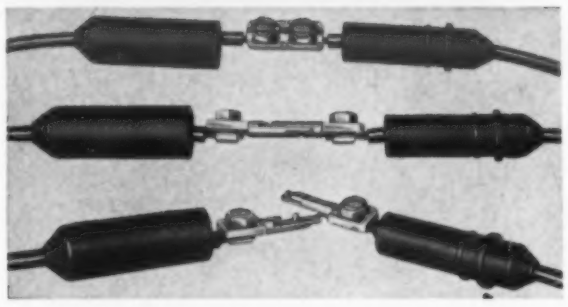
$58.85 K.D.F. F.O.B. NEW BRITAIN Drawer, extra $8.25

INDUSTRIAL BENCH & EQUIPMENT MFG. CO., INC.
91 South Street • New Britain, Conn.

Benches — Steel, Maple Top, Welding • Machine Stands, Work Stands, Bench Legs, Tote Boxes.

For more details circle NED-361 K4 on enclosed inquiry slip

Magnet-Lead Replacement *Simplified* with *Solderless* Connectors and Couplers



EC&M circular Lifting Magnets are now equipped with *Solderless* Connectors and Couplers. The Couplers shown at the top of the above illustration are used a short distance after the lead leaves the magnet terminal-box. From this point on, magnet-leads are subject to damage and should be easily replaceable. The new clasp-type connectors for power lead connections are shown in the two bottom views above.

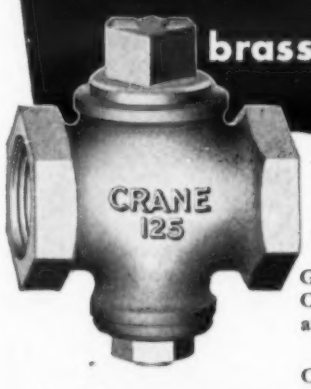
These new magnet couplers and connectors are rated 100-amperes continuous and will accommodate No. 4, 6 or 8 flexible cable. Each Cat. No. 3190-A Coupler and Cat. No. 3189-A Connector is supplied with its neoprene telescoping, insulating jackets.

WRITE FOR CATAOG 9-900

THE ELECTRIC CONTROLLER & MFG. CO.
2698 East 79th Street Cleveland 4, Ohio

For more details circle **NED-362 K4** on enclosed inquiry slip

CRANE *Quality* brass steam cocks



125 and 250-POUND WORKING PRESSURES

Get your brass steam cocks from Crane and be sure of smooth operation with positive closure.

Big selection in the 125-Pound Class—two, three and four-way; square, flat and tee head; with and without check. Sizes up to 2-inch.

Extra strong 250-Pound steam cock of Crane Special Brass available only in two-way pattern with square head. Sizes up to 2-inch.

For full details on Crane Brass Steam Cocks ask your Crane Representative—or see your Crane Catalog.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle **NED-363 K4** on enclosed inquiry slip

G.E.'s Midget Iron Solders Joints the Naked Eye Can't See!

G.E.'s Midget iron is helping precision-instrument craftsmen solder joints the naked eye can't see. And the tip for this miniature iron offers a built-in Calrod* heater which provides the right amount of heat for soldering delicate connections—with minimum loss of heat. Durability . . . ? Technology Instrument Corp., Acton, Mass., reports average tip life of a year and one-half from Midget irons which they used eight hours a day. For more information write for GED-2263, G-E Midget Soldering Iron. Section 720-141, General Electric Company, Schenectady 5, N. Y.

*Reg. Trade-mark of the General Electric Company.

GENERAL ELECTRIC

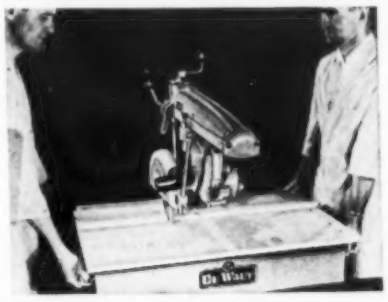
For more details circle **NED-364 K4** on enclosed inquiry slip

COLORED FILM TAPES available plain or printed

Identifying, labeling, sealing and holding applications are possible uses for line of pressure-sensitive colored acetate film tapes. A 0.003-in. integrally colored acetate film base is used in their manufacture. Variety of colors is lightfast and nonbleeding. Tapes will not dry out, expand, contract or delaminate. They are available plain or imprinted. Made by **Labelon Tape Co.**, Dept., OS, 450 Atlantic Ave., Rochester 9, N. Y.

For more details circle **NED-365 K4** on enclosed inquiry slip

WOODWORKING MACHINE is radial-arm multipurpose unit



Powered by a 1½-hp 115 or 230-v motor, improved model GWI radial-arm woodworking machine has a 16-in. cutoff capacity on 1-in. material. It will rip to center of 52-in. panel. Standard blade is 10-in., but a 12-in. blade and guard are optional. With latter, machine will cut up to 4-in. deep. Other new features include bright finish, red plastic control handles, safety "ignition key" type lock and built-in carrying handles. Made by **DeWalt Inc.**, Dept. P-108, 201 Martha Ave., Lancaster, Pa.

For more details circle **NED-366 K4** on enclosed inquiry slip

FLOOR SQUEEGEE useful for sweeping and washing

Cleaning of floors as well as removal of slush and snow from driveways and walks is accomplished readily with this industrial squeegee. Hycar American rubber blades in 25, 35 and 45-in. sizes are unaffected by oil, grease, soap or cleaning compounds. Abrasion resistant blades are curved to prevent dirt and water from spilling around the ends. Made by **Daugherty Rubber Co.**, Dept. NE-25, 2200 Hamilton Ave., Cleveland 14, O.

For more details circle **NED-367 K4** on enclosed inquiry slip

Try HELIX FLAWMASTER

CUT YOUR IMPERFECT PARTS TO THE ABSOLUTE MINIMUM!

- **FLAWMASTER has proved to be unexcelled for eliminating sand pits, small gas holes, shrinks, cracks, deep nicks, scratches in castings and precision metal parts.**
- **FLAWMASTER *permanently* stops leaks in parts designed to be liquid- or pressure-tight.**
- **FLAWMASTER is a quickly applied substitute for numerous soldering and welding operations that are costing you more money than you need be spending. Try FLAWMASTER—modern chemistry's answer to the costly problem of imperfect parts.**

WRITE FOR LITERATURE TO DEPT. NE-10

A better product for better production

CARL H. BIGGS COMPANY
2255 Barry Avenue
W. Los Angeles 64, Calif.

For more details circle **NED-368 K4** on enclosed inquiry slip

Hose Replacement Reduced... 1/3

with **Quaker IRONSIDES STEAM HOSE**

How to lessen hose replacement yet maintain production? That was the cost problem faced by a large chemical company—and solved by Ironsides' ability to give three times the service of other makes. Braided with steel wire and bonded with rubber. Added braid of glass cord for insulation and extra strength. Kink-proof. Easy to handle. At least 4 times stronger than wrapped fabric hose yet costs no more. For economy, use Ironsides—a Quaker exclusive for greater service and safety.

Write for free folder and name of nearest distributor.

QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
Dept. D, Philadelphia 24, Pa. Branches in Principal Cities

For more details circle **NED-369 K4** on enclosed inquiry slip

WHEN YOU WANT WASHERS — SAVE BY BUYING FROM WHITEHEAD

Thousands of washer dies on hand can save you money! O. D. sizes from ⅛" to 18"; any I. D. you want; any thickness from .002" to ⅜". Any metal—steel, brass, copper, bronze, aluminum.

SPECIAL SHAPES MADE TO ORDER

Whitehead's Catalog lists hundreds of washer sizes; also—cable clips; pipe, conduit and wire clips; burrs, plugs, spacer shims, retainers, gaskets—either in stock or made to your specifications. Write for a copy.

54-1

WHITEHEAD STAMPING CO.
EST. 1903

1669 W. Lafayette Blvd., Detroit 16, Michigan

For more details circle **NED-370 K4** on enclosed inquiry slip

Sure! Turner can furnish ordinary 3 or 4 speed transmissions—BUT . . . Turner can ALSO furnish 6 or 9 speeds for AS LITTLE AS $10 to $20 ADDITIONAL . . .

Now, for slight added cost you can have 6 or 9 speeds at the "twist of a wrist." Models range from fractional to 60 H.P. Wide range of applications on machine tools as well as other equipment. Write for specification and descriptive catalog.

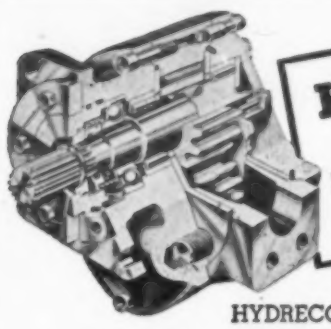
See your dealer or write for further details

TURNER 3R3 UNI-REDUCER

New simplified speed reducer mounts on motor shaft with a torque arm to frame or base. Fits standard motors 1 to 5 H.P., 1800 RPM; 1 to 3 H.P., 1200 RPM. Reduction ratio 3.04 to 1. Write for information.

TURNER UNI-DRIVE Company
3485 Terrace Street Kansas City 8, Missouri

For more details circle **NED-371 K4** on enclosed inquiry slip



HYDRECO Oil Power HYDRAULIC PUMPS ARE DIFFERENT!

HYDRECO Hydraulic Pumps are engineered to survive in applications where other, ordinary pumps fail. HYDRECO Pumps are found *operating* wherever the going is rough . . . whenever shock loads, impact and rugged service are "normal working conditions." No other Gear-Type Pump offers these advantages . . . HYDRECO's exclusive *Pressure-Balanced, Four-Bolt Design* and *Hevi-Duty Construction* . . . low initial cost, years of economical, trouble-free operation and dependable, efficient performance.

HYDRECO Series H Hydraulic Pumps for operation of 1500 psi systems deliver 40, 50, 60 or 70 gpm at 1200 rpm.

Your Free copy of Bulletin No. 142 covers the details of HYDRECO Series H Pumps . . . Write for it!

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1100 EAST 222nd STREET • CLEVELAND 17 • OHIO

▲ For more details circle **NED-373 K4** on enclosed inquiry slip ▲

READ WHAT BLOOMER OF CHICAGO SAYS ABOUT **WALES HOLE PUNCHING UNITS** MONEY AND TIME SAVING FEATURES . .

BLOOMER HEATING & VENTILATING CO.
Contractors · Fabricators
[illegible] WEST 47TH STREET · CHICAGO 9, ILL.
[illegible]

February 26, 1954

Wales-Strippit Corporation
408 Madison Avenue
Oak Park, Illinois

Attention: Mr. Homer G. Gray

Gentlemen:

Very seldom in the operation of a fabricating plant have I come across such cost and time saving opportunities as have been made possible by Wales Hole Punching Units.

To give you a little background, my company bid a job, based on our former gang punching method of tooling, and after we received the order as low bidder, I investigated and bought Wales Units. In addition, we purchased another press brake. The cost records show that we not only paid for these Wales Units and the press brake with this one job but also made our normal profit on the job. We also bettered our delivery estimate by six weeks. Since the completion of this first order I have been using these same Wales Units on similar jobs.

My experiences have proven that setups with Wales Units are eight times faster than our former gang punching methods. Press downtime between setups is practically eliminated by mounting these Units on templates outside the press and just placing the entire assembly on the press bed, ready to start punching.

We were able to double the rated press capacity by staggering the shut height of Wales Units with caps on top of punches. Your Wales Units eliminate stripping problems, spoiled work from improper stripping and broken punches.

I thought you would be interested in these highlights of my experience with your tooling equipment and so I am enthusiastically passing along to you the results of my experiences with Wales Hole Punching Units. I am also enclosing photographs of your equipment in operation.

Very truly yours,
BLOOMER HEATING & VENTILATING COMPANY
E. Ellis
E. Ellis
Plant Superintendent

EE:rp

"NOT ONLY PAID FOR THESE WALES UNITS AND THE PRESS BRAKE BUT ALSO MADE OUR NORMAL PROFIT ON THE JOB"

"ELIMINATE STRIPPING PROBLEMS, SPOILED WORK FROM IMPROPER STRIPPING, AND BROKEN PUNCHES"

"SETUPS WITH WALES UNITS ARE 8 TIMES FASTER THAN OUR FORMER GANG PUNCHING METHODS"

"ABLE TO DOUBLE THE RATED PRESS CAPACITY BY STAGGERING SHUT HEIGHT OF WALES UNITS WITH CAPS ON TOP OF PUNCHES"

This letter from Bloomer Heating & Ventilating Company points out typical time saving and money saving advantages that are also experienced by the thousands of users of Wales Hole Punching Units.

Patented, independent, self-contained Wales Units permit the same group of units to be used and reused in unlimited hole punching setups without aligning punches and dies in the press.

Write for the fully-illustrated, functionally colored catalogs that completely describe Wales Hole Punching Units.

WALES-STRIPPIT CORPORATION
George F. Wales, Chairman
363 Payne Avenue, North Tonawanda, N. Y.
(Between Buffalo and Niagara Falls)
Wales-Strippit of Canada, Ltd., Hamilton, Ontario

Specialists in Punching and Notching Equipment

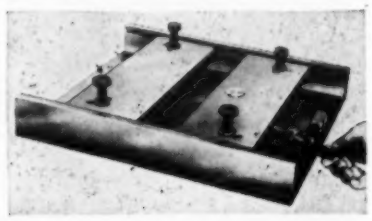
▲ For more details circle **NED-374 K4** on enclosed inquiry slip ▲

DRILL PRESS DRIVE
provides 9 to 1 speed variation

Overall speed variation of 9 to 1 is provided by this drill press drive designed for presses having a 2¾-in. column. To install, mounting bracket is slipped over column and V-belts are applied. Bracket supports speed selector spring-actuated sheave which assures maximum pull at all speeds. Standard drill press motor, cone pulley, spindle cone pulley and V-belts are utilized. Drive is also available to fit drill press columns of other sizes. Made by **Speed Selector Inc.**, 118-U Noble Ct., Cleveland 13, O.

▲ For more details circle **NED-375 K4** on enclosed inquiry slip ▲

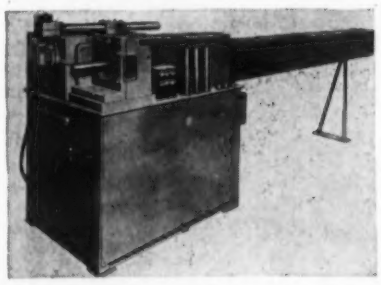
ADJUSTABLE MOTOR BASE
for variable-pitch sheave drives



Quick - Slide motor base is expressly designed for wide range variable-pitch sheave installations. It provides for more take-up than standard V-drives and permits center distance adjustment to compensate for belt stretch and changes in the pitch diameter of the variable pitch sheave. Adjusting screw can be released to allow motor to be moved freely after the base is bolted down. Made by **T. B. Wood's Sons Co.**, Fifth Ave., Chambersburg, Pa.

▲ For more details circle **NED-376 K4** on enclosed inquiry slip ▲

TUBE CUTTER
for ⅜ to 2-in. diameter tubing



Tubing made from any material from ⅜ to 2-in. diameter is cut by Brehm tube cutter. Machine will cut tubes into any desired lengths from ⅜-in. up. Working on the same shearing principle as the Shimmy trimming die, it shears without stock loss leaving a flat unburred edge. It will handle a wide range of stock thicknesses. Machine operates automatically, its cutting cycle taking about 1 second depending upon length of piece and diameter and thickness of tube. Made by **Steel Products Engineering Co.**, Brehm Div., 1100 W. Columbia St., Springfield, O.

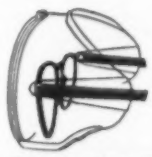
▲ For more details circle **NED-377 K4** on enclosed inquiry slip ▲

IMPROVED No. 90A Series
WILLSON MonoGoggle

Wider, Deeper Frame Gives Greater Clearance Over Spectacles

We've taken the popular Willson MonoGoggle® design and made it with a deeper and wider pliable, transparent vinyl frame with grooves molded into the sides for extra roominess over glasses. It provides protection against light impact hazards on such operations as spot welding, buffing, wood working and chemical handling.

Ask your Willson distributor to show you the new No. 90A Series MonoGoggles, available with either direct or indirect ventilated frames or non-ventilated styles. Or write for bulletin.



Side view shows molded-in grooves in sides of frame provide ample clearance for spectacle temples — removes interference with eye glass comfort.

More than 100 Safety Products · Carry This Famous Trademark
WILLSON
Established 1870

WILLSON PRODUCTS, INC., 219 Washington St., Reading, Pa.

▲ For more details circle **NED-379 K4** on enclosed inquiry slip ▲

POR-ROK (POUR ROCK) *Fast Setting Cement*

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

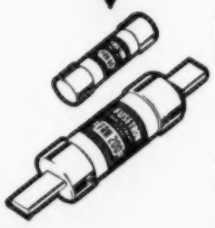
Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO

▲ For more details circle **NED-380 K4** on enclosed inquiry slip ▲

Proven on Loads *UNDER* 600 Amps. **FUSETRON Dual-Element Fuses Have an Interrupting Rating in Excess of 100,000 Amps.**



Recent tests verified by the Electrical Testing Laboratories of New York indicate that an interrupting rating of 100,000 amps. for FUSETRON fuses is a conservative one.

On the most severe available short circuit currents, FUSETRON fuses interrupted safely without igniting readily flamable material placed around the fuses . . . and there was comparatively little noise.

The time-lag characteristic of FUSETRON fuses has in no way been disturbed.

You get ALL THIS ADDED SAFETY without changing a panelboard or switch . . . PLUS the 10 Point Protection of FUSETRON dual-element FUSES — that permits you to load circuits to capacity; eliminates work stoppages caused by needless blows and reduces to a minimum the danger of damage to motors or equipment due to electrical faults.

Proven on Loads *ABOVE* 600 and up to 5,000 Amps. **BUSS Hi-Cap Fuses Have an Interrupting Rating in Excess of 100,000 Amps.**

BUSS Hi-Cap fuses give protection against dangerous overloads as well as high fault current — yet their high speed operation on heavy shorts limits currents to safe values. When coordinated properly with FUSETRON fuses they will not open ahead of the fuse nearest to the fault.

For Maximum Safety and Convenience — install FUSETRON dual-element Fuses and BUSS Hi-Cap Fuses throughout the entire electrical system . . . Once properly installed, no costly inspection time or down-time is required for calibration and other maintenance necessary on mechanically operated devices.

Blowing time charts and more information are available. Write for bulletin FIS and HCS.

FUSETRON · TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION · BUSS

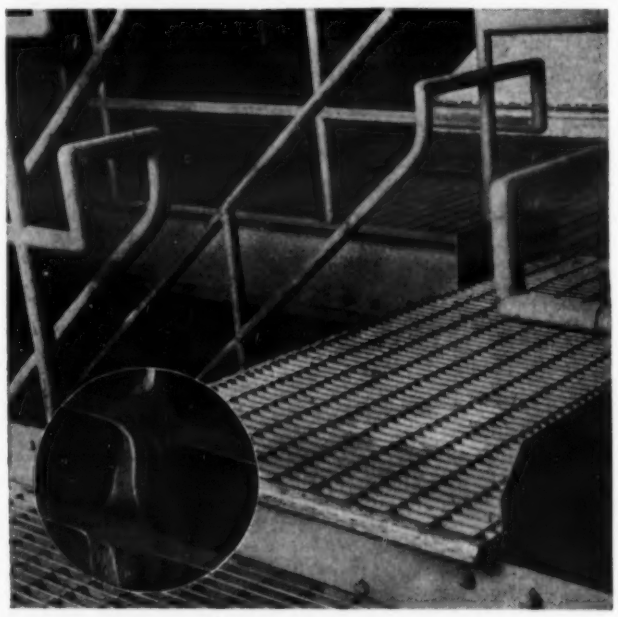
BUSSMANN MFG. CO. (Division of McGraw Electric Co.) **University at Jefferson, St. Louis 7, Mo.**

▲ For more details circle **NED-378 K4** on enclosed inquiry slip ▲

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle **NED-381 K4** on enclosed inquiry slip ▲



Grating by BLAW-KNOX

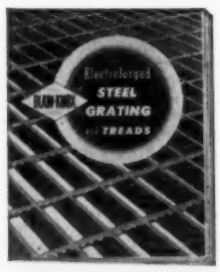
where do **you** need **steel grating?**

There must be lots of places where you are now using grating—floors, platforms, walkways, catwalks and stair treads, for example.

But how about other uses—such as some sturdy shelving or a fan guard—or for covering a dangerous open pit or a light well. Take a good look around your plant and you'll probably come up with several jobs, including perhaps a new use, as steel grating is adaptable to many applications.

Any time you want some help on a job related to grating, we'll be glad to hear from you.

Only BLAW-KNOX Electroforged® Steel Grating and Stair Treads —have these five exclusive features:



1. rigid one-piece construction —easy to install
2. all surfaces accessible —easy to paint
3. no sharp corners to clog —self-cleaning
4. maximum open area —for light and ventilation
5. non-slip twisted crossbar —safe footing

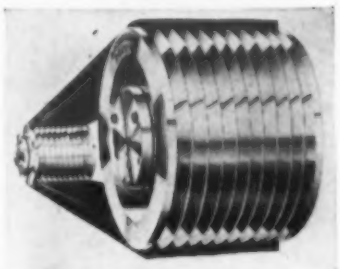
A short note will bring you a copy of new Bulletin No. 2365-R—a dimensional sketch will bring you a quotation.

BLAW-KNOX COMPANY
2068 Farmers Bank Bldg., Pittsburgh 22, Pa.
BLAW-KNOX EQUIPMENT DIVISION GRATING DEPARTMENT

GRATING APPLICATIONS: floors • platforms • walkways • catwalks • stair treads • fan guards • shelving • and many other uses, both outdoors and indoors, for versatile steel grating

▲ For more details circle **NED-382 K4** on enclosed inquiry slip ▲

MULTIPLE V-BELT DRIVES
belt is molded as single unit



Advantages of multiple V-belts are combined with simplicity of flat belts in Poly-V (Raybestos - Manhattan) drives which utilize a belt consisting of rows of parallel V-belts molded as a single unit. This type belt, running on a matched sheave, assures even distribution of load across belt and sheave. Since the V's fit right down to the point of the closely spaced sheave grooves, maximum power per inch of sheave width is provided. Thus, 30 to 50 per cent more power can be achieved where additional sheave space is not available. Complete drives are offered by **Browning Mfg. Co.**, 1940 Browning Dr., Maysville, Ky.

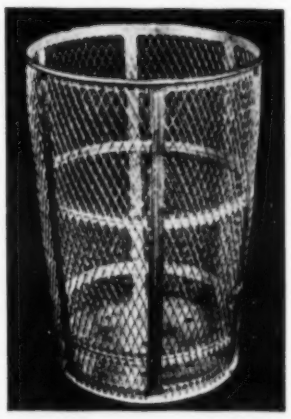
▲ For more details circle **NED-383 K4** on enclosed inquiry slip ▲

ELECTRIC DRILL BIT
is spade-type for ¼-in. drills

Features of the Speedbor 88 spade - type wood bit for ¼-in. electric drills and drill presses include a hollow ground point and precision ground shanks. Forged of high carbon steel, hardened and tempered full length, the brightly polished bits are offered in ⅜, ½, ⅝, ¾, ⅞ and 1-in. sizes. The three flats are accurately spaced to fit three-jaw chucks of ¼, 5/16, ⅜ and ½ in. drills and presses. Size marks are stamped on both sides of blade. Made by **Irwin Auger Bit Co.**, Dept. 16, Wilmington, O.

▲ For more details circle **NED-384 K4** on enclosed inquiry slip ▲

REFUSE BASKETS
of expanded metal, hold small pieces



Expanded metal used in these refuse baskets assures maximum drainage and ventilation, yet prevents escape of small refuse bits. Heavy duty basket is 32 in. high and weighs about 34 lb galvanized. Rolled edging on 24-in. diameter top is burr-free and is welded to expanded metal over entire perimeter. Reinforcing bands and the six equally spaced vertical ribs are all welded at points of contact. Baskets will withstand up to 500 drops on hard surface without deformation. Dished bottom pan is perforated for drainage. Made by **Wheeling Corrugating Co.**, Wheeling, W. Va.

▲ For more details circle **NED-385 K4** on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO M *and* M RAIL CLAMPS

For car stops, on loading platforms, temporary sidings, cars on grades, and traveling cranes . . . Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 44

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 FOURTH ST. PHILADELPHIA 33, PA.

▲ For more details circle **NED-386 K4** on enclosed inquiry slip ▲

ONLY STANDARD CUSHION TIRES were used in the tests . . . a Monarch Mono-Cushion and two leading competitive brands.

ONLY MONO-CUSHION SURVIVED the tests in usable condition. Unretouched photo shows comparative results.

TORTURE TESTS PROVE
. . . THE SUPERIORITY OF *Mono-Cushion®* INDUSTRIAL TIRES

Severe fatigue tests were made on the three tires shown above to compare their wear resistance. Each tire was tested on an overloaded lift truck that was operated at top speed for a fixed time interval. Tires "A" and "B" were too damaged for normal use . . . the Mono-Cushion wore evenly and had a useful service life after testing. All tests were made in one day over same test track. They proved again that MONO-CUSHION IS A BETTER BUY . . . IT COSTS LESS AND LASTS LONGER.

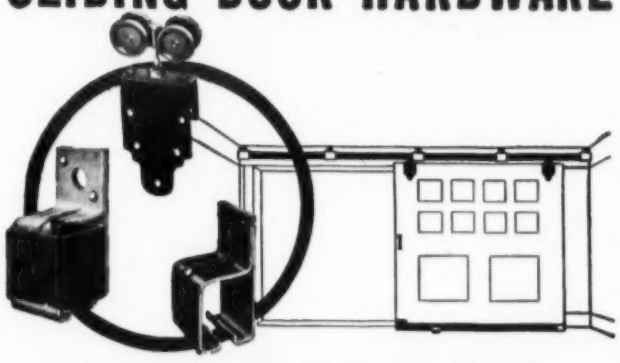
THE **MONARCH** RUBBER COMPANY
4027-MR
260 Lincoln Park • Hartville, Ohio
7-255 General Motors Bldg., Detroit 2, Mich.

For Complete Test Data Write for Bulletin TD-200

▲ For more details circle **NED-387 K4** on enclosed inquiry slip ▲

COBURN

SLIDING DOOR HARDWARE



For All Industrial Door Installations

- ***Door hangers, brackets and track for doors weighing up to 1500 lbs.; up to 3 inches thick.***
- ***Straight and curved track in standard lengths of 6, 8 and 10 feet.***

For information write to Sales & Engineering, 56 Sterling Street, Clinton, Mass.; or see your classified telephone directory.

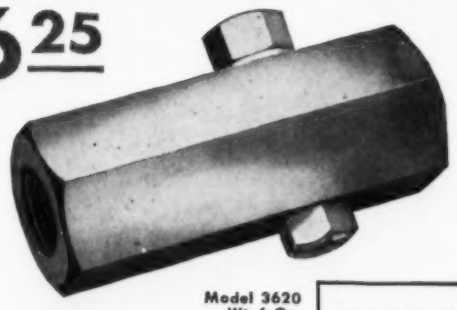
2685

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CF&I

▲ For more details circle **NED-388 K4** on enclosed inquiry slip ▲

RIVETT ⅜" flow control air valve

$6.25



Model 3620
Wt. 6 Oz.
3" Length x 1⅛" Hex.

150 P.S.I. AIR
300 P.S.I.
OIL OR WATER

Meters flow in one direction; allows free flow in opposite direction. Anodized aluminum body; nylon poppet; corrosion-resistant adjusting screw with slotted hex head. Tightening hex nut on opposite end of adjusting screw locks setting.

Call your local Rivett Dealer or write direct.

RIVETT LATHE & GRINDER, Inc., Dept. NED10 Brighton 35, Boston, Mass.

RIVETT **FURNISHES A COMPLETE POWER PACKAGE**

▲ For more details circle **NED-389 K4** on enclosed inquiry slip ▲

NEW

SEND FOR THIS BULLETIN 210 TODAY

Get All the Facts!
BULLETIN 210 CONTAINS

Representatives in Principal Cities
DOLLINGER
CORPORATION
49 Centre Park, Rochester 3, New York

▲ For more details circle NED-390 K4 on enclosed inquiry slip ▲

GROOVE GAGE
for 0.480 to 4.750-in. bores

Internal groove diameter gage developed for use as a production tool either at the machine or in final inspection will repeat to tenths under the most adverse conditions. This makes it particularly suitable for parts with close groove tolerances. Gage can be supplied for standard O-ring and snap ring grooves with bores from 0.480 to 4.750 in. diameter. Made by **A. G. Davis Gage & Eng. Co.**, Dept. C-15, 21435 Dequindre Rd., Hazel Park, Mich.

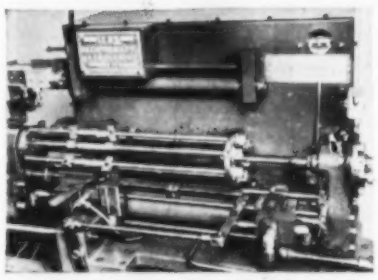
▲ For more details circle NED-393 K4 on enclosed inquiry slip ▲

GRINDING WHEEL ADAPTOR
has wheel-pulling accessory

Precision ground wheel adaptor for tool and form grinding wheels is designed with wheel-pulling accessory which eliminates need to strike adaptor to free it from spindle. Combination spanner and socket wrench for turning adaptor's hex head spindle nut is supplied. Puller consists of threaded steel bushing which screws into open end of adaptor and a $1\frac{1}{2}$-in. puller bolt. Adaptor is offered in three sizes for wheels up to $1\frac{1}{8}$-in. thick and in right or left-hand threads to fit 1-in. spindles. Made by **Wm. Sopko & Son Co.**, 141 E. 267th St., Cleveland 23, O.

▲ For more details circle NED-394 K4 on enclosed inquiry slip ▲

TURRET LATHE DRIVE
clears chips from deep holes



An automatic cycle for withdrawing the deep hole drill from the work to clear the chips is provided by the Lynn Recipromatic hydraulic drive for turret lathes. Drill reenters the hole at rapid traverse to the depth of the cut and continues at normal feed until the chip clearing cycle is repeated. Action can be applied to any or all turret stations. All turret stations are driven by the unit to make the entire machining cycle automatic. Made by **Lincoln Industries**, Dept. NED, 1121 S. Seventh St., Minneapolis 4, Minn.

▲ For more details circle NED-395 K4 on enclosed inquiry slip ▲

JOHNSON BAND SAWS

SPECIFICATIONS — MODEL J
BOTH WET AND DRY MODELS

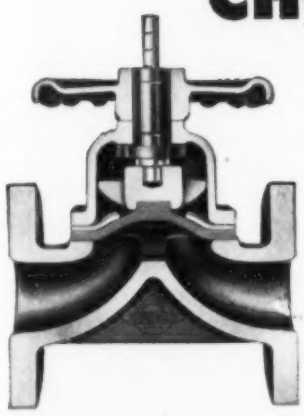
Capacity—10" rounds, 18" flats.
Motor—½ H.P. Ball Bearing any voltage available, single or polyphase. (¾ H.P. on wet machine).
Wheel Diameters—16".
Floor Space—66" x 31".
Bed—11" wide, 44" long, 6" deep, 24" high.
Overall Height—(Closed)—39".
Blade Length—11'5" x ¾" x .032". All Standard blades of these specifications can be used.
Weight—Approximately 750 lbs. Crated 800 lbs. Boxed for export 875 lbs.
Speeds—35, 90, 130, 190 feet per minute.
Casters—Optional at slight extra cost.

MODEL B, 5" x 10" CAPACITY, ALSO AVAILABLE
WRITE FOR DETAILS

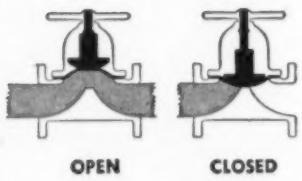
JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle NED-397 K4 on enclosed inquiry slip ▲

ALL-AROUND CHOICE



in industrial circles!



GRINNELL-SAUNDERS DIAPHRAGM VALVES

In plants all around, Grinnell-Saunders Diaphragm Valves have proved themselves economical and efficient in handling materials as diversified as water, corrosive fluids, gases, beverages, foods, compressed air, suspended solids . . . in lines where corrosion, abrasion, contamination, clogging, leakage and maintenance are costly factors.

Available in a range of bodies, linings and diaphragm materials . . . and in a variety of styles and operating mechanisms. If you have a valve problem, consult a Grinnell engineer.

Types of Grinnell-Saunders Diaphragm Valves

Bodies
Screwed ends — ¼" thru 3"
Flanged ends — lined or unlined, ½" thru 18"
Butt weld ends — ½" thru 6"
Socket ends — ½" thru 4"

Angle Bodies
Screwed ends — ¼", ⅜", ½", ¾", 1¼", 2"
Flanged ends — ¾" thru 6".

Bonnets
Handwheel operated bonnet (available with rising stem, travel stops, extended stem, chainwheel, adapted for Tejax indicator)
Quick turn — lever operated bonnet, ½" thru 3"
Bendix-Westinghouse topworks
standard (air to close — spring to open)
Robotair, ¼" thru 1"
Rotochamber, 1" thru 4"; in tandem, 5", 6"
direct acting (spring to close — air to open)
Robotair, ¼" thru 1"
Rotochamber, 1" thru 4"
double acting (air to close — air to open)
Robotair, ¼" thru 1"
Rotochamber, 1" thru 4"
Piston operated, 6" thru 12"
Sliding stem bonnet, ½" thru 12"

Diaphragms
Natural rubber, neoprene, reinforced neoprene for vacuum, hycar, butyl, white gum rubber, Kel-F, Teflon, polyethylene.

Body Materials
Iron, bronze, stainless steel, cast steel, aluminum, monel, saran, durimet

Body Linings
Glass, lead, soft rubber, hard rubber, neoprene, saran

GRINNELL
WHENEVER PIPING IS INVOLVED

GRINNELL COMPANY, INC., Executive Offices, Providence, R. I.
Sales Offices and Warehouses in Principal Cities

▲ For more details circle NED-398 K4 on enclosed inquiry slip ▲

whether you manage

a factory
an office...

an airport
a construction job...

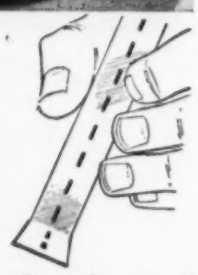
or a super market

it will pay you to investigate
WHEELER
SOUND POWERED
Electric
TELEPHONES

- NO BATTERIES. No outside power.
- LOW in FIRST and LAST COST.
- CLEAR SPEECH. CLEAR SIGNAL.
- ALWAYS READY IN EMERGENCY.
- No electrical hazard.
- UP TO 12 stations intercom.
- SIMPLE standard WIRING.
- Corrosion-resistant construction.

Write for full information and prices.
ASK ABOUT NEW EXECUTIVE-TYPE CRADLE PHONE.
Built and Guaranteed by
THE WHEELER INSULATED WIRE COMPANY, INC.
Division of The Sperry Corporation
1108 East Aurora Street • Waterbury 20, Connecticut
BWH54A

▲ For more details circle NED-391 K4 on enclosed inquiry slip ▲



you pick up a roll
zip professional charts!

You can be a *professional* "draftsman" in minutes (so can anyone in your office.)

Everything you need to make an accurate, professionally drawn graph is pre-printed on self-sticking acetate tape! Lines, dotted lines, bars, people, coins, autos,—*everything!* Merely plot your dots—roll on whatever you want. Presto! A professional graph, without professional help, time or costs.

Write today for all the details on this revolutionary graph-making method! Chart-Pak materials also available for organization and flow charts, and office layout.

CHART-PAK, INC.
94G Lincoln Ave. Stamford, Conn.
Rush that Chart-Pak information to:
Name
Company
Address
City State

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NEW AIRETOOL "ONE-MAN" CONDENSER CLEANER

Newest of all Airetool Condenser Cleaners ... the lightweight CC-4325 weighs only 11 pounds, yet does a heavyweight job.

Requires no supporting rig ... easily handled by only one operator. When used with a carbide-tipped drill, the CC-4325 will even clean tubes that are completely plugged with hard deposits. Powerful two-stage motor, fast running and muffled for quieter operation; built-in flushing system cools drill and removes cuttings. Cleans tubes up to 1" diameter, with wide variety of cutter, drill and brush cleaner heads available.
Write for full details on this new Airetool Condenser Cleaner today!

AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

BRANCH OFFICES: New York, Chicago, Philadelphia, Houston, Tulsa, Baton Rouge

Representatives in principal cities of U.S.A., Canada, Mexico, South America, England, Japan.

▲ For more details circle NED-396 K4 on enclosed inquiry slip ▲

NO COMPETITOR DARES COPY

Your Name Plate

Make it WORTHY Of Your Product

As the maker's "signature," your name plate is one thing that can set your product apart from all others. Make it *distinctive*, and let it reflect the quality you offer.

Let us help you create such a "signature." Our skilled craftsmen, long experience and modern equipment insure finest results. Send a rough sketch or blueprint for design suggestion and quotation.

Write now for "Etched or Lithographed Metal Products," with full color examples of name and instruction plates.

CHICAGO THRIFT-ETCHING CORPORATION
1555 N. SHEFFIELD AVE., CHICAGO 22, ILL., DEPT. U
SUBSIDIARY OF DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA
For more details circle NED-399 K4 on enclosed inquiry slip

Photo Courtesy Speer Carbon Company

THE STRUTHERS WELLS
IMPREGNATOR
. . . with the Quick Opening Closure!

for Impregnating Electrical Coils, Aluminum or Magnesium Castings, Carbon Parts and Other Materials

The improved Struthers Wells impregnating system illustrated—one of many recent installations—is heated with circulating hot oil, with a separate hot air system for preheating the charge before impregnation. Covers are quickly removed or installed—with great savings in operating labor. Furnished as bare units, or complete with piping, instruments and accessories. Heated by steam, electricity or circulating heat transfer medium.

Write for Bulletin B-30 (on your letterhead, please)

STRUTHERS WELLS CORPORATION
WARREN, PA.
Plants at WARREN, PA. and TITUSVILLE, PA.
For more details circle NED-400 K4 on enclosed inquiry slip

UNIVERSAL CHUCKS

save time . . .
save money . . .

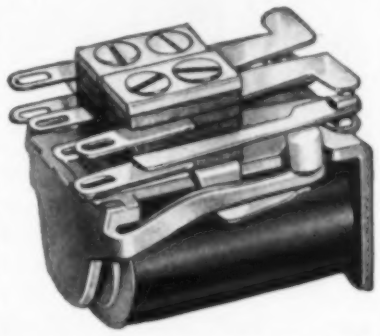
- low first cost, due to simple design.
- wrap-around gripping action eliminates scored tool shanks.
- precision manufacturing assures tools running true.
- sizes from 1/16" to 1½", shanks to fit any type machine.

Standard Collet Chucks for a wide variety of applications.
Floating Chucks for reaming and tapping.
Coolant-Fed Chucks for deep hole drilling.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN
173-A
For more details circle NED-401 K4 on enclosed inquiry slip

MINIATURE RELAY
telephone type withstands extreme vibration, shock and temperature

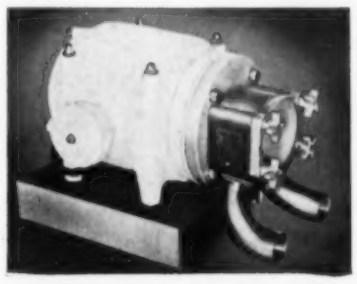
Miniature type TS telephone-type direct current relay is designed for service under extreme vibration, shock and temperature variations. Relay is suitable for communications apparatus, aircraft, radar and all types of electronic equipment, both industrial and military. It is available with coils for standard voltages up to 125 v dc or resistances up to 6500 ohms. Ambient temperature range is −55° to 85° C, while special coils are obtainable for −65° to 125° C.



Relay withstands shock and acceleration up to 50 G and vibration up to 10 G at 5 to 500 cps, depending on contact sizes and combinations which can be up to 6 PST (open type) and 4 PDT (closed type). Standard fine silver contacts are rated 3 amp at 28 v dc, 1 amp at 115 v ac, noninductive. Unit has 1-million cycle life expectancy and is 1000-v rms insulated. It is available varnish impregnated and can be hermetically sealed. Made by **Comar Electric Co.**, 3351 W. Addison St., Chicago 18, Ill.

For more details circle NED-402 K4 on enclosed inquiry slip

SANITARY PUMP
for noncontaminating service also handles viscous and abrasive fluids

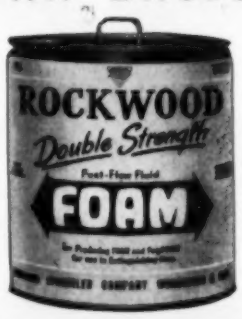


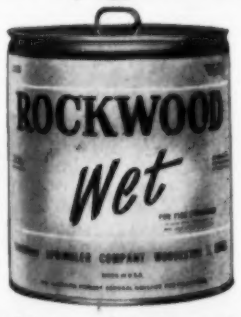
Food products, pharmaceuticals or chemically pure fluids are handled without contamination by self-draining Sani-Flex sanitary pump. Gentle pumping action prevents churning or foaming of fluid. Pump will also handle viscous materials or abrasive slurries that would normally present sealing problems.

Pumping is accomplished by progressive "squeegee" action on the fluid which is confined between the smooth inside surface of stainless housing and outside surface of neoprene or other synthetic rubber liner. Rotating eccentric pump shaft is isolated within flexible liner. Removal of four stainless wing bolts releases end plate, exposing inner parts for easy inspection and cleaning. Inlet and outlet connections conform with 3A sanitary requirements, or are furnished with hose connections, if desired. Made by **Vanton Pump & Equipment Corp.**, Dept. NED, Empire State Bldg., New York 1, N. Y.

For more details circle NED-403 K4 on enclosed inquiry slip

Cut Fire Losses with These Firefighters





Rockwood Double Strength FOAM covers burning surfaces faster, seals off combustible vapors and flows freely around obstructions — even at sub-zero temperatures. Three parts FOAM mixed with 97 parts water form a foam blanket that re-seals if broken. Because it's concentrated, FOAM saves storage space and shipping costs.

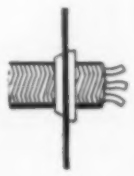
Rockwood WET increases firefighting action of water, is a great aid in putting out deep-seated fires involving combustibles such as wood, paper, cloth. Also excellent wherever water is scarce. With WET, rekindling is reduced.

Use Rockwood's FOAM Eductor and Type SG-60 Nozzle for introducing these firefighting liquids into your hose lines. For complete details, write for free, illustrated Rockwood catalog, "Fire Fighting Products." Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses
350 HARLOW STREET, WORCESTER 5, MASSACHUSETTS
For more details circle NED-404 K4 on enclosed inquiry slip

C-D-F MAKES IT . . .

The Grommet that Springs out and **HOLDS TIGHT!**



• The aircraft industry needs thousands of grommets for wires and cables passed through bulkheads. C-D-F offers this unique answer:

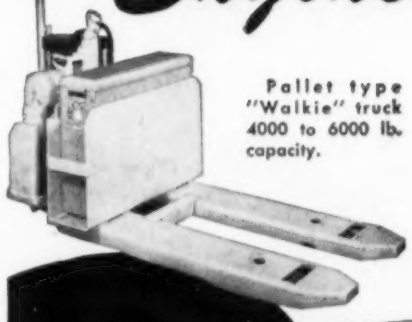
Fine weave canvas C-D-F Dilecto rolled tubing is cut into rings. Each ring is grooved and beveled on its outer diameter, then slit diagonally.

Result: Plastic grommets that are easily compressed and inserted by hand. The built-in tension of the tough Dilecto ring makes it spring outward, tight against the edge of the hole . . . cushioning...insulating...saving assembly time!

DILECTO is mechanically and dielectrically strong. Resistant to high heat, hot oil, excessive humidity. C-D-F sells it in sheets, tubes, rods in a wide range of grades . . . also handles complete fabrication on high speed machines. Write now for sample grommet and Dilecto catalog!

Continental-Diamond Fibre
CONTINENTAL-DIAMOND FIBRE COMPANY • NEWARK 30, DELAWARE
For more details circle NED-405 K4 on enclosed inquiry slip

Engineered



Pallet type "Walkie" truck 4000 to 6000 lb. capacity.

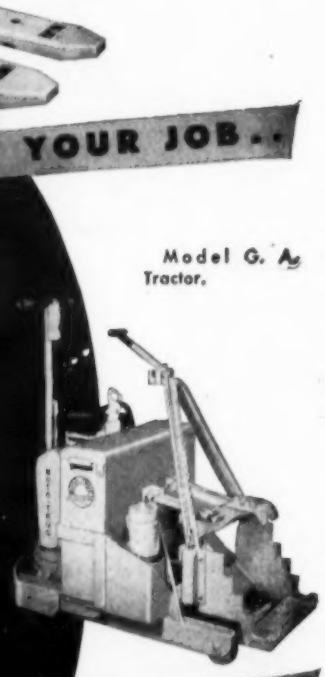
TO FIT YOUR JOB . .

***Custom Built or . . . Standard Models**

Whether your materials handling job requires special applications or is adaptable to standard models, the cost is relatively the same.

Our Engineers will welcome the opportunity to discuss YOUR particular material handling job . . . Moto-Truc's can be engineered to fit the job. Investigate their "Job application" offer in the economical "Walkie" type lift trucks. Your inquiry will receive prompt attention.

SEND FOR BULLETIN #53



Model G. A. Tractor.

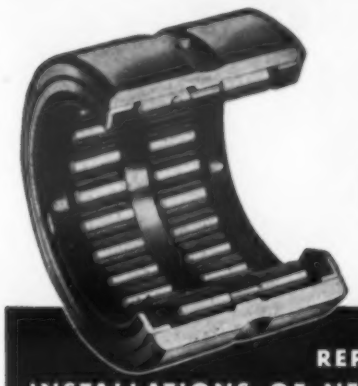
. . . AT NO EXTRA COST*

Platform "Walkie" type 4000 to 10,000 lb. capacity.

Hi-lift "Walkie" type 3000 to 4000 lb. capacity.

Representatives in Principal Cities

The MOTO-TRUC Co
MOTO-TRUC Designers for the Industry PATENTED
1961 E. 59th STREET • CLEVELAND 3, OHIO
PALLET . . . PLATFORM . . . HI-LIFT TRUCKS
LARGEST EXCLUSIVE MANUFACTURERS OF "WALKIES"
For more details circle NED-406 K4 on enclosed inquiry slip



NEW McGILL® sealed GUIDEROL® full type roller bearing

REPLACES COSTLY INSTALLATIONS OF NEEDLE BEARINGS AND SEPARATE SEALS

Dependable GUIDEROL Bearings are now available in a new series that incorporates single or double seals without any increases in overall bearing width. It's the first sealed unit to replace ordinary needle bearings having auxiliary sealing arrangements. Housings can be less complicated and smaller with less machining.

Complete with commercial lip type seals, the new unit costs very little more than standard bearings for shaft sizes of ⅜" to 2 inches. Five seal combinations increase application possibilities for this first sealed full-type roller bearing.

Detailed information is contained in a new bulletin, SGR-54. Write for it today.

McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. LAFAYETTE ST. VALPARAISO, INDIANA

▲ For more details circle NED-407 K4 on enclosed inquiry slip ▲

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NAME PLATES • PANELS • DIALS

in your own shop

Lowest set-up time for unskilled labor

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10,000 IN USE Accepted by all leading manufacturers as the speediest, most versatile portable engraver. Only the NEW HERMES has these patented features:

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Send direct to us for booklet IM 26

NEW HERMES ENGRAVING MACHINE CORP.
13-19 University Place • New York 3, N. Y.

Here's how to SAVE TIME in SETTING-UP and KEEPING your MACHINES LEVEL

Fast Accurate Self-Aligning Machine Leveler

Empco JACK

Empco Jacks enable you to meet hurry-up demands for relocation of machinery by giving you the fastest, easiest, most accurate machine leveling ever known: you simply raise or tilt machine sufficiently to allow the Empco Jacks to be slipped under base. The number of jacks required depends on weight of machine and size of base. Once set on Empco Jacks, the entire operation of leveling and maintaining equipment level is quickly done. By applying a wrench to the "hex" head of adjusting screw, an adjustment is obtained either up or down until your level indicator reads "zero." Write for specifications and prices today.

Vibration absorbing mounting pads increase machinery life.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

▲ For more details circle NED-408 K4 on enclosed inquiry slip ▲

AIR PRESSES with ¾ to 2-ton capacities

Press-fit assembling, marking, forming, staking, light stamping and similar successive operation jobs may be performed on Paragon air presses. Four models have cylinders with 4, 5, 6 and 7-in. bores which have power factors of 12.56, 19.63, 28.18 and 38.47 times air line pressure. All feature a 5-in. long side-thrust-resisting bearing, brass cylinder and removable base with large ground surface area to facilitate fixture mounting. Two-piece body permits unlimited extension of table-to-ram height. Series of self-aligning sub-presses which permit instant set-ups and set-up changes is optional. Three largest models have 3-in. stroke, ¾-in. ram, 6½-in. throat depth and 9-in. table-to-ram height. Made by **Price Machine Products,** Dept. NED, 929 W. 80th St., Los Angeles 44, Calif.

▲ For more details circle NED-409 K4 on enclosed inquiry slip ▲

MINIATURE REMOTE INDICATOR for pressure, flow, level, etc.

Features incorporated in miniature remote indicator with 5-in. usable scale include removability, one-man zero adjustment, no parallax, internal illumination and flush or semi-flush panel mountings. Indicator can be supplied as an electric or pneumatic receiver for measurement of such functions as pressure, draft, flow, level or temperature. Gages can be provided with two units in a single case and two pointers on the single scale. Direct reading gage, using a bourdon tube as the actuating element, is available for indicating pressures of fluids. Made by **Hays Corp.,** 980 Eighth Ave., Michigan City, Ind.

▲ For more details circle NED-410 K4 on enclosed inquiry slip ▲

Fork Truck Anatomy

Baker-Raulang Co.—12-page well-illustrated brochure No. 64 contains series of 20 photographs and explanatory copy covering the most important aspects of fork truck design. Model FT-40 4000-lb unit is used as a specimen. Electric powered trucks are described as available in a wide range of models and with many interchangeable attachments.

▲ For more details circle NED-411 K4 on enclosed inquiry slip ▲

Cut Piping Layout Costs

NAYLOR FABRICATION SERVICE Can Save You Time, Material and Labor

By eliminating numerous flanged joints and combining several fittings into one integral unit, Naylor fabrications assure greater efficiency and real economy—from the simplest to the most complex layout. All types of materials fabricated accurately to your specifications. Sizes from 3 to 44 inches in diameter. Thicknesses to ⅜".

Write for Bulletin No. 525.

NAYLOR PIPE

Naylor Pipe Company • 1247 East 92nd St., Chicago 19, Illinois
Eastern U.S. and Foreign Sales Office 350 Madison Ave., New York 17, N.Y.

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To save money on crane runway maintenance

Get this free booklet

● This important booklet describes our three Special Crane Rail Sections, which were designed to give longer life under heavy wheel loads. And it shows a special technique of tight-joint-assembly which, when combined with a new conception of "floating rail" fastening, will result in fewer delays in crane operation and less costly crane and runway maintenance.

Don't delay, send for your copy today. Just write to United States Steel Corporation, Room 4347, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

USS SPECIAL CRANE RAIL SECTIONS USS

UNITED STATES STEEL

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Let us Prove . . .

★ *Faster cutting, even on hardened steel or abrasive surfaces!*

★ *Superior finishes!*

★ *Increased production and reduced tool costs!*

Job-engineered for greater production profits!

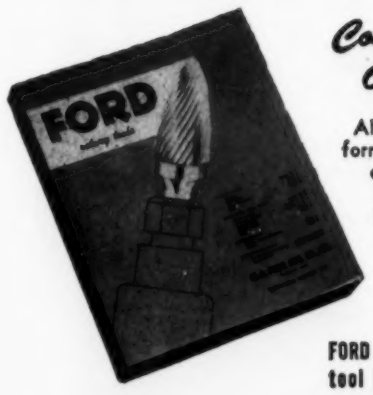
FORD

solid CARBIDE END MILLS

On-the-job tests of FORD solid carbide end mills confirm their superiority! Greater rigidity, job-engineered spiral flutes and cutting edges, and close tolerances all contribute to faster, better production and lower costs. Sizes to ½". See new catalogue No. 207.

FORD -- *the complete line!*

HSS ground cutters, rotary files, countersinks
CARBIDE cutters, end mills, grinding burs



Complete Details, Operating Data

All specifications, plus informative operational data on more than 300 FORD stock rotary tools contained in new FORD catalogue No. 207, just released. Send for YOUR copy.

FORD regrinding service adds new tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.
Pioneers in rotary tools for more than 30 years
721 West River St., Davenport, Iowa

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FOR
ACCURATE
CONTROL OF AIR

MASONEILAN No. 71
Reducing Valve

Built to maintain accurate control of air pressures under the toughest conditions, this sturdy reducing valve is a real money saver. Compact. Easy to service. It has large capacity . . . instant response. Its simple design and sturdy construction reduces maintenance to a minimum.

Initial pressure up to 250 lbs., reduced to any pressure from 5-60 lbs., 60-100 lbs. Sizes ¼" to ½". Pressure gauge included.

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN
REGULATOR CO.
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle NED-415 K4 on enclosed inquiry slip

HEAVY DUTY PILLOW BLOCKS
in bores from 3.1496 to 7.4803 in.

Heavy-duty, self-aligning roller bearings are incorporated in series LPK-7800F mill bearing pillow blocks which are designed for use in steel mills and other heavy industries. Units have steel cap and base. Split housings are secured with four extra-heavy bolts and dowels. Bearing adjusts immediately in all directions, assuring full load capacity, even under shaft deflections and inaccuracies of mounting. Press fit of bearings on machined shafts assures positive concentric mounting. Bore sizes range from 3.1496 to 7.4803 in. Made by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

For more details circle NED-418 K4 on enclosed inquiry slip

CRANE TRUCK
with telescoping boom, lifts 6000 lb

Hard-to-manage loads up to 6000 lb can be placed in or retrieved from normally inaccessible areas by this crane truck. Unit has 12 ft 6 in. heavy channel telescoping boom that measures 19 ft 2 in. extended. Travel speed is 3½ mph with full load, while hoist speed is 28 fpm without load and 14 fpm with full load. Crane is designed with slewing or swinging action to facilitate handling on either side of travel area without additional movement. Magnet, one of several attachments which can be used as shown, receives its power from battery, or from gas or diesel-electric generating unit. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

For more details circle NED-419 K4 on enclosed inquiry slip

Electric Boxes & Covers

General Electric Co., Construction Materials Div. —More than 170 different types of boxes to meet every wiring installation need are listed in 40-page booklet 18-74. Included are boxes for use with armored cable, nonmetallic sheathed cable, rigid and flexible conduits and electrical metallic tubing. Bar hanger boxes, covers, gang boxes and other miscellaneous items are also listed.

For more details circle NED-420 K4 on enclosed inquiry slip

there's almost no end of applications for...
Abart SPEED REDUCERS

CONVEYORS
STOKERS • DISHWASHERS • FANS • BLOWERS
COMPRESSORS • AGITATORS • MIXERS
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MACHINE TOOLS
ORE ROASTERS
WATER SCREWS
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COMPACT • EFFICIENT
LONG LASTING • TROUBLE FREE

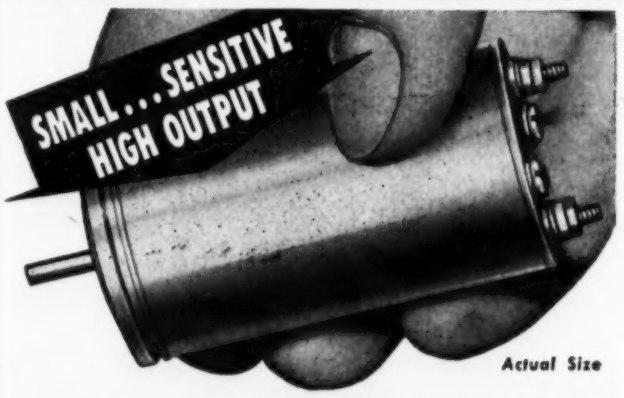
Abart Speed Reducers are available in over 75 types and sizes—spur, worm, and combination—ratings from 1.50 to 168 hp., with ratios up to 10,000 to 1. Specials to order.

Send for free data-packed, pocket-size Abart Catalog.

ABART GEAR and MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears and Speed Reducers • *Bishop 2-2524*

For more details circle NED-416 K4 on enclosed inquiry slip

SMALL . . . SENSITIVE
HIGH OUTPUT



Actual Size

GENERATORS

Globe miniature, lightweight, permanent magnet D.C. Generators produce high output voltage linear with speed, and require low starting torque to provide positive sensitivity for use as a rate device in servo systems, for instrument indicating applications, and for circuit power.

Units may be driven up to 20,000 RPM. Up to 28 volts per 1,000 RPM with ± 2% linearity and less than 5% ripple in most ranges can be provided. Depending on windings, units can produce as high as 12 watts continuous output power. Available with synchro type mounting and/or tapped holes; with plain, pinion or geared shaft; and with screw terminals or lead wires.

WRITE TODAY FOR BULLETIN 800

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MOTORS • GEAR REDUCERS • GENERATORS • GOVERNORS • SERVOS
BLOWERS • FANS • ACTUATORS • SWITCHES • GYROS • VIBRATORS
1792 STANLEY AVE., DAYTON 4, OHIO

For more details circle NED-417 K4 on enclosed inquiry slip

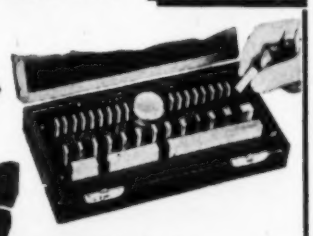
ULTRA-CHEX GAGE BLOCKS
for Every Need!

Supplied in one Superior Accuracy
5 MILLIONTHS ± ACCURACY

9 Block Set $22.50
OPTICAL PARALLEL $5.00

Quick Delivery on Small Standard Sets

34 Block Set $125.00
INCLUDING OPTICAL PARALLEL



82 Block Set
$275.00 Complete
This Set will supply the needs of any discriminating shop that must work to gage-block precision.

All Sets at "Money Saving Prices" due to Mass Production Methods.

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Dealers: Here's a real profitable line!

GEORGE SCHERR CO., INC.
COMPLETE LINE OF PRECISION INSTRUMENTS
200-ND LAFAYETTE ST. • N.Y. 12, N.Y.

For more details circle NED-421 K4 on enclosed inquiry slip

For Protecting Water Pipes

SELF-STICKING
PERMACEL® TAPES
In our complete line, there's a self-sticking tape for every job . . . write Permacel Tape Corporation, New Brunswick, N. J.

For more details circle NED-422 K4 on enclosed inquiry slip

Well-stacked!

Use your air space from floor to ceiling to stack materials on E.M.I. racks. They save valuable floor space, protect workers and stock, and speed up materials handling in warehouse, plant or dock. Low-level stock is never tied up. Stationary or portable racks fabricated of strong, square tubular steel are available to stack most materials. Sections can be adjusted to fit any space or unit load. E.M.I. engineers will design special racks for your materials. You save money, space and time with E.M.I. racks.

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EQUIPMENT MFG. INC.
21566 Hoover Rd., Detroit 5

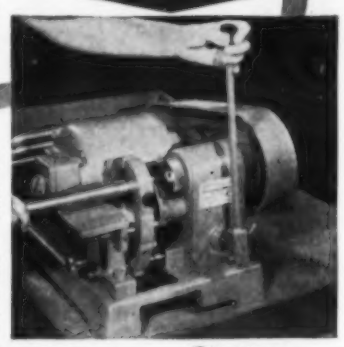
- Pallet Racks
- Portable Stock Racks
- Dolly Racks *(Illustrated)*
- Coil Racks
- Drum Racks
- Special Racks for All Applications

For more details circle NED-423 K4 on enclosed inquiry slip

HERE'S HOW TO *Speed* TUBE DEBURRING

- CHAMFERING
- POINTING
- FACING
- REAMING

PINES No. 600



The Pines No. 600 End-Finishing Machine is designed for fast, accurate work. Women operators commonly debur up to 800—1" tube ends per hour. Exclusive operating features include single lever control which clamps and feeds work to rotating cutters in one pass, enabling operator to have one hand free for stock handling. Small and compact, the Pines machine is equipped with quick, interchangeable tool holders, chuck inserts, 8 speed sheave (760 to 3920 rpm), sturdy spindle, and grease-sealed precision bearings. The No. 600 unit illustrated, handles stock diameters up to 2". Maximum feed stroke is 1¼". Automatic air-operated units are also available for higher production work, and larger models for stock sizes up to 5".

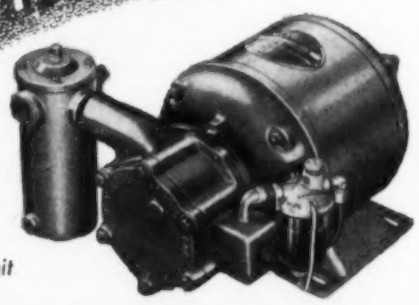
Write FOR FREE BULLETIN

Write for facts on how these machines cut costs on a wide range of work.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 643 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

▲ For more details circle NED-424 K4 on enclosed inquiry slip ▲

MOTOAIR VACUUM PUMP



COMPACT!

motor and pump in ONE integral unit

Extremely compact design makes Motoair ideal for any machines where sustained or intermittent vacuum is required—also for Laboratory work. Visible, automatic, circulating lubricating system. Made in several sizes.

823. *Send for Catalog details . . .*

NEW JERSEY MACHINE Corporation
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES
1550 WILLOW AVENUE, HOBOKEN, N. J.

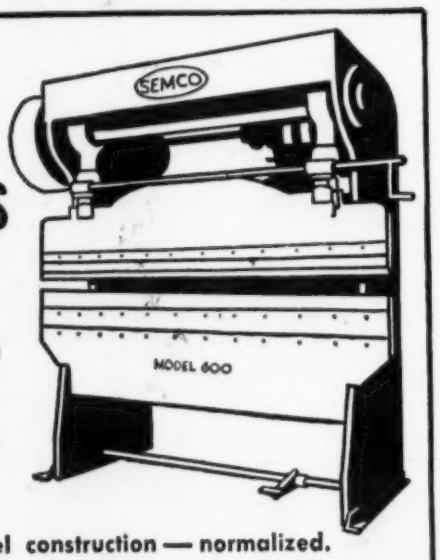
▲ For more details circle NED-425 K4 on enclosed inquiry slip ▲

NEW PRESS BRAKES

in four sizes 6', 8', 10' and 12' 30 to 60 ton.

LOW PRICED

BIG PRESS FEATURES



- All steel construction — normalized.
- Ball and Roller Bearings throughout.
- Fine adjustment of ram.
- Heavy pitmans with buttress threads.

Made by the makers of famous SEMCO "35 YEAR" BRAKE DIES.

Write for NEW color folder and prices of PRESS BRAKES and 26 standard BRAKE DIE designs. Send die specifications for estimate.

SEMCO SERVICE MACHINE CO., INC.

202 Miller St. Elizabeth 4, N. J.

▲ For more details circle NED-426 K4 on enclosed inquiry slip ▲

CABLE SPLICING METHOD

compact kit makes factory-perfect resin-protected splices in field

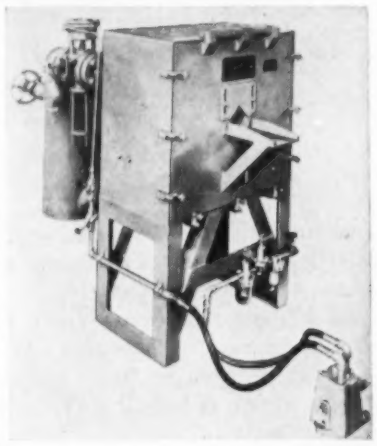
Electrical cable splicing and insulating method permits factory-perfect work to be done easily and quickly under field conditions. Using Scotchcast splicing kit 82A, splice is embedded in liquid epoxy resin that hardens into a hermetically sealed casting. Kit includes all materials for splicing single conductor cable from wire sizes 10 to 4 AWG using only a pocket knife.

Resin and hardener are contained in plastic Unipak container with inner division separating them until use. Container is kneaded with the fingers to break division and mix contents. Illustration shows how corner is snipped from container and resin poured into vinyl plastic mold assembled round the splice. Resultant joint sets up within 20 minutes. Backfilling can be begun immediately after pouring. Joints are of high dielectric strength and have excellent adhesion and resistance to moisture, corrosion, oil and solvents. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

▲ For more details circle NED-427 K4 on enclosed inquiry slip ▲

BILLET DESCALER

hand and automatic feed models



Elmes welded steel billet descaling cabinet has a spray ring with four replaceable spray nozzles which encircle the billet. Unit is intended for locations where furnace and forging press are close together or where only part of the billet is to be descaled. It will handle a variety of pieces and can be supplied with necessary operating controls for use with an existing accumulator system, or as a complete unit including the accumulator. Illustrated unit is hand feed type, but an automatic unit with gravity or power driven conveyor is offered in either pit or floor mounted types. This model has six spray nozzles, heat resistant roller conveyor and rustproof screening in spray basket. Made by **American Steel Foundries**, Elmes Engineering Div., 1150-S Tennessee Ave., Cincinnati 29, O.

▲ For more details circle NED-428 K4 on enclosed inquiry slip ▲

A USG GAUGE for every purpose

Rugged, dependable gauges with enduring accuracy . . . in every price class.

- IMMEDIATE AVAILABILITY—USG maintains the world's largest stock of standard gauges—over 200,000 in all types, sizes and ranges.
- EVERY SPECIAL REQUIREMENT—USG maintains the most complete line of stocked gauge components to economically handle on a large volume basis, all special requirements for any pressure sensing and actuating need.
- USG is the largest gauge manufacturer in the world. Its facilities are economically integrated for large volume, quality controlled production, permitting better gauges at competitive prices.

Consult USG first for all your standard and special gauge requirements.

UNITED STATES GAUGE USG *Gauge Headquarters* for over 50 years

United States Gauge, Division of American Machine and Metals, Inc., Sellersville, Pa.

▲ For more details circle NED-429 K4 on enclosed inquiry slip ▲

See how "National" can help you solve "SPECIAL" fastener problems

In many cases involving "special" fasteners or small parts, National's "Special Products Service" has planned a method of manufacture by cold heading that has solved the problem . . . with economy and volume production. Just a few of the many "specials" produced at National are included in this factual 16-page booklet. Send for your free copy today and see how National's wide range of cold heading equipment and specialized know-how can help you solve a limitless variety of "special" fastener problems.

FREE BOOKLET

National PRODUCTS

THE NATIONAL SCREW & MFG. CO.
2440 East 75th St.,
Cleveland 4, Ohio

▲ For more details circle NED-430 K4 on enclosed inquiry slip ▲

MIX FLUIDS in any tank or container

Get rapid, thorough mixing in any open vessel—with a LIGHTNIN Portable Mixer.

It clamps in place. You can adjust it immediately to the correct angle. It mixes completely and uniformly, by causing rapid top-to-bottom turnover, plus rotation of tank contents. No baffles necessary.

RAPID, UNIFORM MIXING
Mounted at off-center angle, LIGHTNIN turns tank contents over and over, while rotating them around and around.

Do these mixing jobs—fast

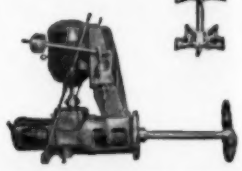
Get just the kind of action you want with a LIGHTNIN. Vigorous mixing, or gentle blending. Beat, stir, circulate fluids. Disperse gases in liquids. Wash, dissolve, suspend solids . . . quickly, uniformly.

Fully guaranteed to do an efficient mixing job for you, or your money back. Thousands in use everywhere. Many in service over 20 years.

Thirty portable models to choose from—⅛ to 3 HP. Electric and air motor types. Direct or gear drive.

Send today for illustrated Catalog B-108 and prices.

FOR BIG MIXING JOBS
Turbine and paddle mixers for open or closed tanks. Sizes 1 to 500 HP. Send for Catalog B-102.



FOR VERY LARGE TANKS
Side entering propeller mixers. Sizes 1 to 25 HP. Send for Catalog B-103.

Lightnin® Mixers

MIXING EQUIPMENT Co., Inc.
165-k Mt. Read Blvd., Rochester 11, N. Y.

In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Avenue, Toronto 10, Ont.

▲ For more details circle NED-431 K4 on enclosed inquiry slip ▲

Only 90 seconds to drill 3½" holes through 4" concrete slab with TRUCO WATER SWIVEL and TRUCO SWIVEL DIAMOND DRILL BITS

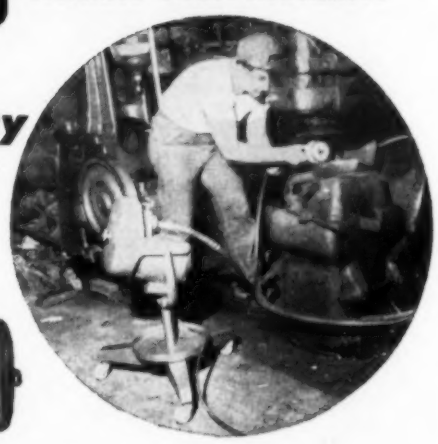
This combination can drill at high speed in hardest aggregates with only 150 lbs. pressure and ½" H.D. motor as against 1,000 lbs. pressure and 1"-1¼" H.D. motor specified for other tools. Truco combination can drill *reinforced concrete;* amazing drilling speed in brick, granite, ceramic tile, marble. Truco Water Swivel and Truco Swivel Diamond Bits can easily pay for themselves on your first job. Write for folder:

WHEEL TRUEING TOOL COMPANY
55-3200 West Davison Avenue • Detroit 38, Michigan

For more details circle NED-432 K4 on enclosed inquiry slip

STOW flexible shaft machines

your best buy because they serve your customers better



Versatile . . . choice of operating speeds . . . specially designed to provide *highest efficiency!* Constant speed and other variable speed models also available.

For over 75 years, STOW FLEXIBLE SHAFT MACHINES have been famous for long trouble-free performance.

STOW

Don't delay—write *today* for your free copy of CATALOG #51.

STOW MANUFACTURING CO. 26 Shear St., Binghamton, N.Y.

For more details circle NED-433 K4 on enclosed inquiry slip

AMAZINGLY COMPACT GEARING!

The most frequently cited reason for specifying Cone-Drive gears and speed reducers is "their amazing compactness."

The reason why Cone-Drive gears are so compact is that they are 'double-enveloping'. They thus have more teeth in continuous contact and load per tooth is distributed more evenly over each tooth face.

As a result, smaller gears—up to ⅓ smaller center distances—can be used to carry the loads when Cone-Drive gears are specified.

If space saving is one of your design objectives, it will pay you to look into Cone-Drive gears and reducers . . . NOW.

They can be a big help to you and they are available in a wide range of standard sizes and ratios.

CONE-DRIVE GEARS Division, Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS 7171 E. McNichols Road • Detroit 12, Michigan

For more details circle NED-434 K4 on enclosed inquiry slip

VARIABLE TRANSFORMER compact, gives 0 to 150-va output

Designed for 50, 100 and 150-w loads, Adjust-A-Volt 100BU variable transformer is compact and easily installed in back of panel positions. Toroidally-wound hydrogen annealed auto-transformer smoothly and continuously delivers any output from 0 to above line voltage without waveform distortion. Brush design maintains constant pressure on plated commutation surface and features safety stop which prevents brush holder from contacting winding when brush is completely worn down. Transformer is rated single phase, 60 cycle, 120-v input and 0 to 120-v output, 1.25 output amps, 150/165 va. Made by **Standard Electrical Products Co.,** 2239 E. Third St., Dayton, O.

For more details circle NED-435 K4 on enclosed inquiry slip

MOTOR STARTING RELAY made in ratings up to 5 hp

Type ARR-1 motor starting relay is designed for single-phase capacitor-start and capacitor-start, capacitor-run fractional or integral horsepower mo-

tors. It is applicable where adverse atmospheric conditions exist or where it is desired to have remote control incorporated into an explosionproof case. Relay coil is wired across the starting winding of a single-phase motor. Relay is available in ratings up to 5 hp, 115/230 v. Made by **General Electric Co.,** Schenectady 5, N. Y.

For more details circle NED-436 K4 on enclosed inquiry slip

Steam & Hot Water Unit Heaters

American Blower Corp.—Features of design, general engineering data, capacity tables and piping diagrams are among information found in 44-page illustrated bulletin 7517. Horizontal and vertical heaters for steam and hot water heat are described. Quietness ratings, pipe sizes, selection examples and wiring diagrams for the Venturafin heaters are given.

For more details circle NED-437 K4 on enclosed inquiry slip

Speed Production... Automatically with

T-J RIVITORS

Boost production . . . save labor in aircraft, automotive, farm machinery, stampings of all kinds . . . with T-J Rivitors! Automatically feed and set solid rivets. Electrically-powered Rivitor sets 1/16" to 1/4" diam. solid rivets up to 7/8" long. Air-powered Rivitor sets aluminum alloy rivets up to 1/4" diam. or steel rivets up to 1/8" diam. and up to 3/4" long. Throat depths 8" to 36". Write for bulletins 646 and 847. The Tomkins-Johnson Co., Jackson, Mich.

T-J Rivitor used for automotive clutch plate assembly. Does four-fold job—assembling, setting, inspecting, ejecting.

37 YEARS EXPERIENCE (T-J)
TOMKINS-JOHNSON
RIVITORS . AIR AND HYDRAULIC CYLINDERS . CUTTERS . CLINCHORS

For more details circle NED-438 K4 on enclosed inquiry slip

for clear, accurate NAME PLATE MARKING

WAGNER DISTRIBUTION TRANSFORMER

"Its accuracy and the uniform clearness of the marking are the features that make it superior to the method previously used," say officials of Wagner Electric Corporation, St. Louis, about the Automark.

This unique detail marking machine employs a standard typewriter keyboard. Light touch on key produces mark by instantaneous electrical response. Production speeded, operator fatigue lessened. Heavy-duty table. Wide range of plate size and thickness. Type sizes from 1/16" to ¾".

For complete details on the Automark metal marking electric typewriter, **WRITE TODAY** for Bulletin 8-16.

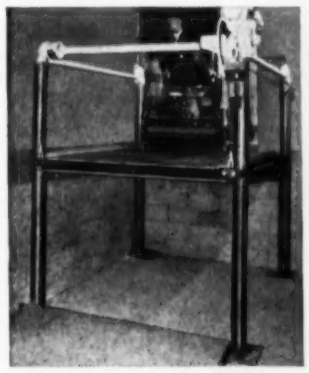
DEFIANCE MACHINE & TOOL COMPANY
1928 South Vandeventer Ave. • St. Louis 10, Mo.

For more details circle NED-439 K4 on enclosed inquiry slip

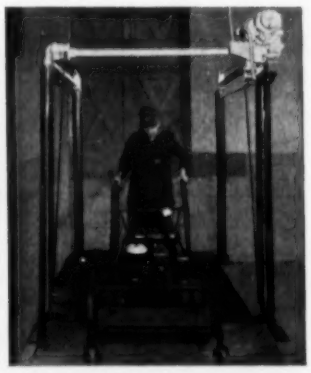
GLOBE Electro-LOADER can be installed anywhere . . . *indoors or outside!*

GLOBE Electro-LOADERS provide speedy, *economical* loading, lifting, and materials handling service *anywhere.* No ground excavation or special foundations are required for installation, and lifting power is supplied by an electric motor operating n simple cable mechanism.

A versatile GLOBE Electro-LOADER eliminates the need for muscling heavy loads up and down ramps or stairs or across makeshift bridges . . . saves time, money, and manpower in loading trucks, trailers, railroad cars and in moving materials between plant levels. Lifting capacity of the 6'x8' steel platform of the standard model GLOBE Electro-LOADER is 6,000 pounds; lifting height is 5'10⅜".



Typical GLOBE Electro-LOADER installation that licks a tough materials handling problem in a busy plant. One man can quickly, *economically* move heavy loads between plant levels.



Power shuts off automatically when platform reaches maximum "up" or "down" levels. Ramp 24" wide is supplied as extra equipment. Plow steel cables have total strength of 26,400 pounds.

A GLOBE Electro-LOADER is the one right answer to lifting, loading, and materials handling problems in places where the installation of other types of lifts is impractical. It can be installed on upper floors, basements, driveways, yards, areaways . . . on any concrete, wood, or paved surface . . . and can easily be moved to a new location in a short time. Use the coupon *today* to get illustrated booklet with full data on the GLOBE Electro-LOADER.

GLOBE THE BEST LIFT

Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Pa.

Globe Hoist Company NED-635A
East Mermaid Lane at Queen St.
Philadelphia 18, Pa.

Please send me illustrated data booklet on GLOBE Electro-LOADERS.

Name.....
Company.....
Address.....
City.....Zone....State.....

For more details circle NED-440 K4 on enclosed inquiry slip

SQUARE D
for a COMPLETE LINE of
INDUSTRIAL PRESSURE SWITCHES

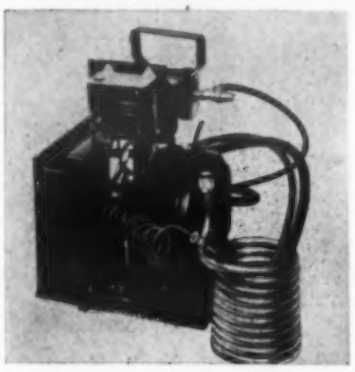
Write for Bulletin 9012
Square D Company
4041 North Richards Street
Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-442 K4 on enclosed inquiry slip

PORTABLE REFRIGERATOR UNIT will deliver 790 Btu at 20° F



Typical uses of this Cold Package portable refrigerator unit include crystallization studies, cloud and pour tests of petroleum products, melting point determination and circulation of cooling media through constant temperature bath. The 45-lb unit which uses Freon 12 plugs into any 115-v ac outlet and delivers 790 Btu at 20° F. It is complete with Barber-Colman thermostat and mobile cooling coil, latter of which is at end of two 6-ft flexible insulated hoses. Thermostat will maintain temperature control with 1 to 2° differential. Models are available with or without cabinets, in several sizes and with auxiliary force-flow circulating pump and heat exchanger for handling liquid coolants. Made by **A. Daigger & Co.**, 163 W. Kinzie St., Chicago 10, Ill.

For more details circle NED-444 K4 on enclosed inquiry slip

Try the MODERN
SAFETY DRILL TABLE

For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.
In 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete

MODERN MACHINE TOOL CO.
Jackson, Michigan

For more details circle NED-448 K4 on enclosed inquiry slip

SMALL PARTS DEGREASER has motor driven pump, spray lance

Rapid cleaning of oily parts is accomplished with non-inflammable trichlorethylene vapors in this individual type Super Barrel vapor spray degreaser. Parts are flushed with solvent by means of motor driven pump and spray lance. Unit requires only 7 gal of solvent for operation, and dirty solvent can be automatically reclaimed and used again. Standard 55-gal galvanized drum is degreasing chamber, providing a working area of 23-in. diameter with 20-in. vapor depth. Either gas or electrically heated models are available. Made by **Baron Industries**, 241 (I.O.) West Ave. 26, Los Angeles 31, Calif.

For more details circle NED-445 K4 on enclosed inquiry slip

Building Maintenance

Tremco Mfg. Co. — 24-page "Quick Reference Guide" contains more than 50 photographs and drawings illustrating such aspects of building maintenance and construction as flashing and coping repair, roofing, installation of mastic flooring, caulking and pointing, glazing and painting.

For more details circle NED-446 K4 on enclosed inquiry slip

New
WESTON (Model 980)
Volt-Ohm-Milliammeter

RANGES:

D-C Volts: 1.6, 8, 40, 160, 400, 1600 (20,000 Ohms/Volt)
A-C Volts: 1.6, 8, 40, 160, 400, 1600 (1,000 Ohms/Volt)
DB Range: —15 db to +54 db (in six ranges)
D-C Milliamperes: 8, 80, 800
D-C Microamperes: 80
D-C Amperes: 8

OHMS RANGE	CENTER SCALE	FULL SCALE
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohm
R x 10,000	250,000	10 megohms

Accuracy 2% d-c, 3% a-c
Scale length 4.63"—size 6¼" x 7½" x 3¼"
Weight 2 lbs., 11 oz.

Complete literature on Model 980, and other WESTON test equipment available on request. WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, New Jersey 8104

At leading Distributors
WESTON *Instruments*

For more details circle NED-443 K4 on enclosed inquiry slip

Lightweight Pallet Truck is Easiest To Pull . . .
. . . never needs greasing

Here's the best hydraulic pallet truck buy in years! New Lewis-Shepard Model HPL weighs only ½ as much as standard trucks . . . handles loads up to 2000 lbs. . . . costs you less to buy . . . and it's the easiest pulling truck made!

Factory-sealed ball bearings in the HPL eliminate periodic greasing . . . virtually eliminate all maintenance . . . insure longer truck life!

Get all the facts on this new, low cost, lightweight truck. Write for Circular 26A . . . TODAY!

The Most Complete Line of Materials Handling Trucks

LEWIS-SHEPARD
732-10 WALNUT ST., WATERTOWN 72, MASS.
The "MASTER" Line

For more details circle NED-449 K4 on enclosed inquiry slip

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CAN WE SERVE YOU?

PAPER AND SPOOL SHAPES

We are equipped to make a wide variety of paper shapes for industrial users, including cones, tubes, cores, spools and moulded shapes. These products are available in various colors and many different surfaces. They can be impregnated, printed, perforated, scored, lacquered, flocked or in any combination of these processes.

Our laboratory and engineering departments are available for consultation and experimental development. If it can be made out of paper, as a low cost substitute for metal, plastic or wood, we can make it and save you money.

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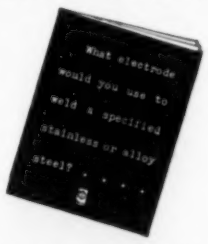
DEPENDABLE SOURCE OF SUPPLY

For more details circle NED-447 K4 on enclosed inquiry slip

Stainless Maintenance

GIVE YOUR WELDS A LASTING "OK"

A prime requirement of successful maintenance welding is in the selection of the proper Stainless Rod or Electrode. In all respects the deposit of weld metal must offer maximum compatibility to the type and grade of stainless being welded. To assure sound, lasting welds in repair and renovation work, more and more welders are specifying Arcos for two reasons: (1) The wide selection of Stainless Rods and Electrodes assures a *right one* for every job. (2) Arcos quality controls in manufacture guarantee weld metal that is consistently uniform. For more information, write today for "What Electrode Would You Use". ARCOS CORPORATION, 1500 South 50th Street, Phila. 43, Penna.



ARCOS CORPORATION
1500 South 50th Street, Philadelphia 43, Pa.

For more details circle NED-450 K4 on enclosed inquiry slip

WHEN LIGHTS GO OUT EXIDE® LIGHTGUARDS® GO ON INSTANTLY...AUTOMATICALLY!

NEW MODEL M

Whenever normal lighting is interrupted—no matter what the reason—you get adequate emergency lighting INSTANTLY. Your customers and employees are safeguarded against injuries; property damage, pilferage, loss of process control is minimized. Exide Lightguards are UL-approved and can be plugged in anywhere. Operates instantly—each lamp illuminates up to 10,000 sq. ft. Exide battery in one lamp unit provides power for more than 8 hours of continuous lighting. Once normal power is restored, automatic controls recharge the dependable, long-life, trouble-free Exide battery.

WRITE for facts on why Exide Lightguards guarantee more protection for every dollar you invest in such equipment.

Exide INDUSTRIAL DIVISION,
The Electric Storage Battery Co., Philadelphia 2, Pa.

▲ For more details circle **NED-451 K4** on enclosed inquiry slip ▲

Easier on the eyes ...and the overhead!

Ozalid® prints are white prints—clear, sharp, with dull surface that doesn't reflect light, show glare—far easier to work with.

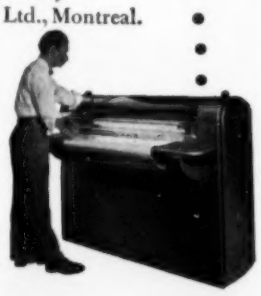
An Ozalid print can be revised to show changes or modifications without altering the master drawing.

AN OZALID machine can copy anything drawn, typed, printed, or written on translucent paper, fabric or film—and deliver dry copies on Ozalid coated paper, fabric, or film . . . in any size and quantity needed, in a matter of minutes . . . without waiting or delay, and at low cost.

Anybody can use an Ozalid, no special training or experience required. Call the nearest Ozalid distributor (*see phone book*) and ask for a demonstration of the model best suited to your requirements. Or write for free brochure to 134 Ozaway, Johnson City, New York.

OZALID—A Division of General Aniline & Film Corporation...*From Research to Reality.* In Canada, Hughes Owens Company, Ltd., Montreal.

OZALID STREAMLINER—*copies material up to 42 inches wide, at speeds up to 14 feet per minute. Ideal for average industrial and business requirements.*



OZALID

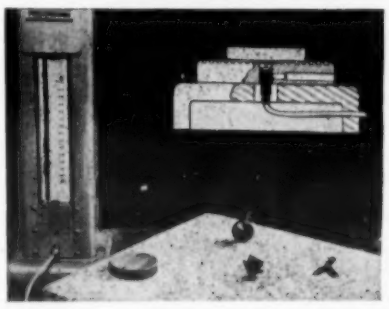
▲ For more details circle **NED-452 K4** on enclosed inquiry slip ▲

SPEED REDUCER for floor, wall or ceiling mounting

Helical gear systems incorporated in line of Multi-Mount speed reducers offer high efficiency, maximum resistance to wear and shock loads and quiet operation. Units can be mounted, without modification, on floor, wall or ceiling, with shaft horizontal or vertical. Neoprene oil seals keep foreign material out of gear case. Further protection is offered by labyrinth seal on input shaft. Dip-and-splash system provides lubrication. Double and triple reduction reducers are available with feet or footless, face or flange mounted. Horsepower ratings range from ½ to 30-hp at 1750 rpm input. Speed ratios available are from 5.1:1 to 195:1. Made by **Sterling Electric Motors, Inc.**, Dept. NED, 5401 Telegraph Rd., Los Angeles 22, Calif.

▲ For more details circle **NED-453 K4** on enclosed inquiry slip ▲

FLATNESS GAGES of steel or stone, amplify 2000:1



Gaging element in flatness gages is Plunjet gage cartridge mounted in steel or stone surface plate so that contact point projects slightly above plate surface. Workpieces are passed over cartridge contact point and variations from flat are indicated by position of float in the Precisionaire. Amplification is 2000 to 1. Standard steel gage has 4⅞ x 6-in. serrated surface plate with overall flatness of 0.00005-in. Pink granite gages are 4-in. thick with same overall flatness. Sizes 8 x 12 and 12 x 12 in. have two ledges, while 12 x 18 and 18 x 18-in. sizes have four ledges. Made by **Sheffield Corp.**, 721 Springfield St., Dayton 1, O.

▲ For more details circle **NED-454 K4** on enclosed inquiry slip ▲

Press Brakes

Niagara Machine & Tool Works—32-page illustrated bulletin 89-C describes line of press brakes made in 19 models with capacities from 50 to 775 tons. Double end twin drive, sealed oil bath gearing, laminated nonmetallic ways and electro pneumatic clutch are among features described. Data for computing bending, punching and blanking tonnages are provided.

▲ For more details circle **NED-455 K4** on enclosed inquiry slip ▲

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FOR... DESIGNERS
METHODS ENGINEERS
PROCESS ENGINEERS
PRODUCT ENGINEERS
MECHANICAL ENGINEERS
RESEARCH ENGINEERS
SUPERINTENDENTS
PURCHASING AGENTS

SEND FOR THESE HELPFUL BULLETINS TODAY

SERVICES BULLETIN NO. 161 describes the facilities that make Federal a *one-stop* stamping service. Specifications cover special die stamped wrenches, nameplates, and quality short run stampings from any stampable material.

COSTS BULLETIN NO. 101 shows how Federal's special dies give the accuracy, exact duplication, and tolerances of permanent dies *plus* saving as much as 80% on die costs.

Federal TOOL AND MANUFACTURING CO.
3618 ALABAMA AVE. (ST. LOUIS PARK)
MINNEAPOLIS, MINNESOTA
"QUALITY STAMPINGS IN SMALL QUANTITIES"

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YOU SAVE $$$ WITH

EMBOSSED LABELS

NO DIE CHARGE

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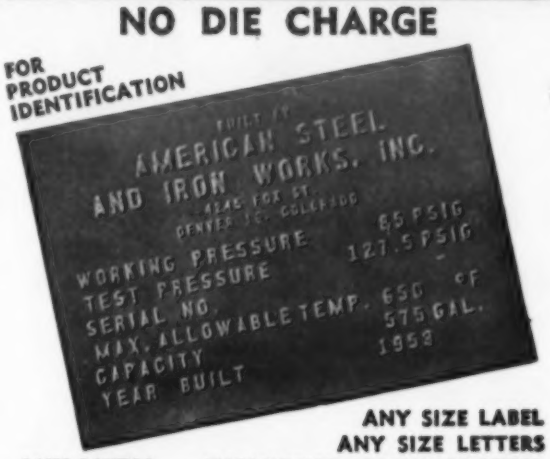

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ANY SIZE LETTERS
ANY METAL — INCLUDING STAINLESS STEEL

Raised-letter nameplates to your specifications. Less expensive than comparable etched labels.

Tack-weld, rivet or screw them to your product. Paint or galvanize over them. Wording will remain sharp and clear. Also etched and lithographed labels.

Send Sample or Sketch for Price Quotation

DEPT. C.

TECH PRODUCTS, INC.
442 Mosel Avenue Staten Island 4, N. Y.

▲ For more details circle **NED-457 K4** on enclosed inquiry slip ▲

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

KELLER TOOLS

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
1331 Fulton St., Grand Haven, Mich.

▲ For more details circle **NED-458 K4** on enclosed inquiry slip ▲

with a LINK-BELT Car Spotter

ONE man . . . two or three turns of rope around the motor-driven capstan . . . and up to six loaded cars are spotted accurately in seconds. Pays for itself in reduced switching and demurrage charges. Can also be used for quick, easy moving of heavy vehicles, skids, barges, etc.

Get the complete story. WRITE TODAY!

LINK-BELT COMPANY 13,615
307 N. Michigan Ave.,
Chicago 1, Ill.

Please send me 24-page illustrated Book 2092.

Name .....
Firm .....
Address .....
City ..... Zone .... State .....

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Moving packaged drugs from floor to floor on Ferguson roller and belt conveyors.

MAKE YOUR MOVES ON

Ferguson Conveyors

You have parts, products, packages to move . . . from floor to floor . . . department to department . . . one end of a line to another. What's the best way to do these jobs? On Ferguson Conveyors. They're custom engineered to fit the need . . . to save handling . . . to speed assembly, packaging, shipping. Every day, users in all types of industries everywhere get more efficient materials handling at lower operating costs with Ferguson Conveyors.

Write, wire or call us today with your materials handling problem and for facts and figures on Ferguson belt, roller and wheel conveyors.

HARRY J. ferguson COMPANY
125 WEST AVE., JENKINTOWN, PA.
OGontz 4401

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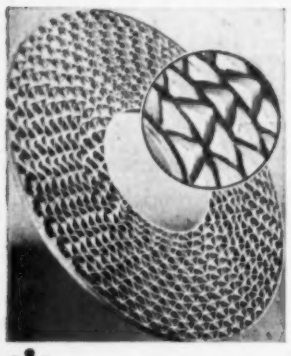
thinking of PM* ?



Don't overlook the FRANTZ FERRO FILTER MAGNETIC SEPARATOR

*** PREVENTIVE MAINTENANCE**

Here's one of a stack of strongly magnetized grids, the hard-working heart of a FRANTZ FERROFILTER. These grids comb and re-comb iron and steel chips and particles out of coolants and cutting oils; lubricating and hydraulic oils. This gives your cutting tools longer life — higher output between grinds. It reduces abrasion of pumps, valves, gears, bearings and other surfaces subject to wear in your production equipment.

Send for BULLETIN 56 for application and installation data; types and sizes of these permanent magnet separators.

S. G. Frantz Co., Inc.
P. O. Box 1138 Trenton 6, N. J.
Manufacturers of Permanent Magnet and Electromagnetic Separators

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FOR ACCURATE TEMPERATURE READINGS AT ALL TIMES . . .

. . . SPECIFY *UNITED ELECTRIC* TYPE E8N INDICATING CONTROL

The Type E8N is a wide range, precision-built indicating control that shows the exact temperature of the thermal bulb at all times. It is simple in design, contains no delicate mechanisms and is accurately compensated for wide ambient temperature changes. Various models are available, covering ranges of 300°F to 600°F between limits of -150°F to 600°F, permitting a high degree of sensitivity and repeat accuracy. For complete details and electrical specifications, write for Bulletin #4-1.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle NED-462 K4 on enclosed inquiry slip ▲

TWO-WAY SOLENOID VALVES for gas and liquid control

Designed for controlling flow of air, gas, water, light oil and other non-corrosive fluids, compact solenoid valves are available normally closed or open. Standard, watertight or explosionproof enclosures are used. Normally closed model measures only 3 13/16-in. high and 2¾-in. face-to-face. They can be used on all standard direct and alternating current voltages, and have a 10-w power consumption. Maximum pressure rating is 250 psi on air. Packless valves have fluid-contacting parts of brass or stainless steel for corrosion resistance. They can be mounted in any position. Either class A or H coils are available. Currently available are ⅜ and ½-in. pipe sizes. Made by **Automatic Switch Co.**, 379-D Lakeside Ave., Orange, N. J.

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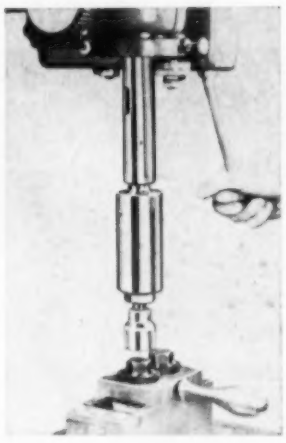
TORQUE WRENCH adjustable for 5 to 45 lb ft



Bolts, studs, nuts, cap screws, spark plugs or almost anything with threads can be driven to any predetermined torque with this torque wrench which is adjustable from 5 to 45 lb-ft. Wrench can be used as a hand tool, with portable electric or air power tools, or on machine tools for single or multiple spindle operations. Before tool starts drive, shaft must be depressed to engage tool. After disengaging, it is free-wheeling. Wrench can be used with any type adapter and can be arranged to fit any type socket. Made by **B. E. Parish Co.**, Dept. 1-A, 3340 Fenkell, Detroit 38, Mich.

▲ For more details circle NED-464 K4 on enclosed inquiry slip ▲

Business Dictionary

"Dictionary of Business & Industry" clearly defines 45,000 business and legal terms not found in standard works. Compiled to further the interests of standardizing terminology, it also contains 32 pages of time saving charts and tables. These include coins and notes of the world, foreign weights and measures, conversion factors, square and cube roots and other units of measurement. Price is $7.95 from B. C. Forbes & Sons Publishing Co., Inc., 80 Fifth Ave., New York 11, N. Y.

▲ For more details circle NED-465 K4 on enclosed inquiry slip ▲

WHEN DRILLING CONCRETE

USE THE DRILL THAT GIVES YOU 50% MORE HOLES!

● Users tell us they get 50% more holes in concrete with TERMITE Rotary Masonry Drills. This superior performance is due to TERMITE's exclusive worm construction and the "WICTU" inserts which last longer and penetrate faster. TERMITE Drills give you cleaner, more accurate holes and their pulverizing action eliminates objectionable noise. Insist on the leader in the field . . . Remember the more holes you get per drill — the lower your drilling costs. Write for FREE literature and the name of your nearest TERMITE Drill distributor.

Lengths up to 36". Standard diameters from 3/16" to 5". Other diameters up to 8" on special order. Use with standard electric drills or air motors. FREE FACTORY SERVICING.

TERMITE DRILLS, INC.
Manufacturers of
TERMITE ROTARY MASONRY DRILLS
84 N. LOTUS AVE., PASADENA 8, CALIF.

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Brainard Strapping Tape

SPEEDS PACKAGING AND REINFORCING

● Streamline your package closing, reinforcing, bundling, holding, and palletizing with Brainard Strapping Tapes—either pressure-sensitive or gummed. Brainard offers a complete line of dispensers, like the hand dispenser shown above, which permits fast tape application, holds rolls up to 8" in diameter and has a patented corrugated cut-off blade. Brainard's complete Strapping System includes steel strapping and strapping tapes—assuring you of unbiased recommendations.

Brainard
SHARON STEEL
STEEL DIVISION
SHARON STEEL CORPORATION

For booklet write:
BRAINARD STEEL DIVISION
Dept. HH-10, Griswold Street
Warren, Ohio

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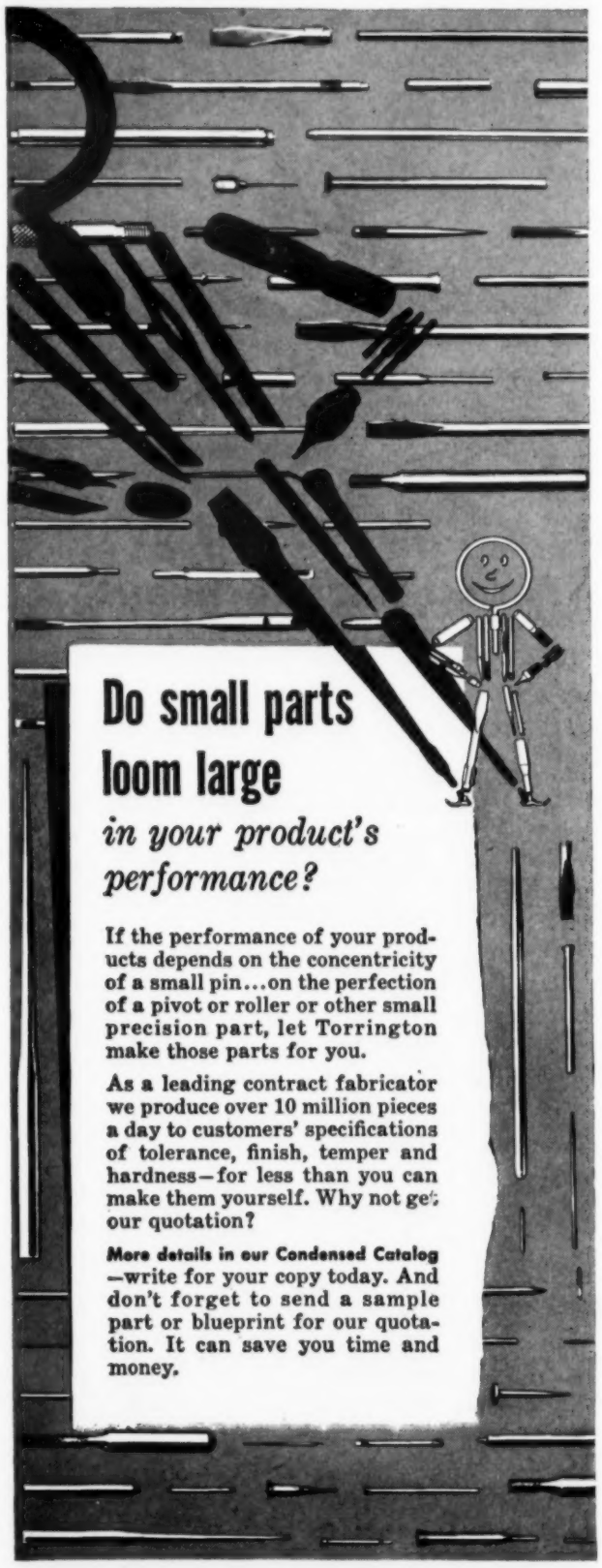

Do small parts loom large *in your product's performance?*

If the performance of your products depends on the concentricity of a small pin . . . on the perfection of a pivot or roller or other small precision part, let Torrington make those parts for you.

As a leading contract fabricator we produce over 10 million pieces a day to customers' specifications of tolerance, finish, temper and hardness—for less than you can make them yourself. Why not get our quotation?

More details in our Condensed Catalog —write for your copy today. And don't forget to send a sample part or blueprint for our quotation. It can save you time and money.

THE TORRINGTON COMPANY
Specialties Division
808 Field Street, Torrington, Conn.

TORRINGTON SPECIAL METAL PARTS

Makers of Torrington Needle Bearings

▲ For more details circle NED-468 K4 on enclosed inquiry slip ▲

TWO SIMPLE REASONS WHY!

● We will guarantee—in writing—that you'll save money on your blast cleaning costs when you use Permabrasive* shot and grit instead of conventional annealed abrasives. Yes sir, a guaranteed savings in writing.

We can afford to make this statement, because Permabrasive shot and grit are better. They are better for two simple reasons: (1) Permabrasive is made from metal of the proper analysis. Its carefully controlled chemical composition insures uniform response to heat treatment and maximum resistance to breakage. (2) Permabrasive is heat treated properly. A continuous processing method insures complete heat treatment of each abrasive particle, resulting in a high degree of uniformity and assuring maximum abrasive durability.

Permabrasive will save you money and we can prove it. Write the nearest Hickman, Williams office for proof and a complimentary copy of "A Primer on the use of shot and grit."

*Licensed under U. S. Patent No. 2184926, U. S. Application No. 619602

PERMABRASIVE* SHOT AND GRIT IS PRODUCED EXCLUSIVELY BY THE NATIONAL METAL ABRASIVE CO. • Cleveland, Ohio

AND SOLD EXCLUSIVELY BY

HICKMAN, WILLIAMS & CO. (INCORPORATED)

CHICAGO • DETROIT • CINCINNATI • ST. LOUIS • NEW YORK
CLEVELAND • PHILADELPHIA • PITTSBURGH • INDIANAPOLIS

▲ For more details circle NED-469 K4 on enclosed inquiry slip ▲

The Spray Gun INDUSTRY PREFERS

Model P-JGA-502

$32.00

F. O. B. Toledo, Ohio

The DeVilbiss P-JGA spray gun is a high speed, large capacity, production-type gun of exceptionally compact design. Its light weight, comfortable balance and easy action minimize fatigue. Has extra-capacity to handle even the heaviest spraying requirements. Sprays any finishing material. Can be fitted with various nozzles to produce a wide variety of spray patterns for regular and special uses. Write for full details.

DEVILBISS THE DEVILBISS COMPANY Toledo, Ohio

Santa Clara, Calif. • Barrie, Ontario • London, England

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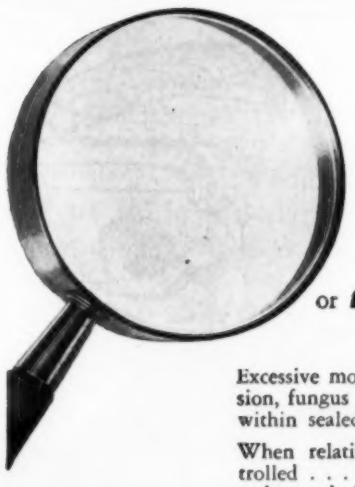


you may not see it . . . or *feel it,* but *it's there!*

Excessive moisture vapor causes corrosion, fungus growth and other damage within sealed containers.

When relative humidity is not controlled . . . Precision equipment corrodes and fails. Optical instruments fog and are temporarily useless. Electronic and radio equipment lose efficiency. Certain foods and drugs lose freshness or deteriorate.

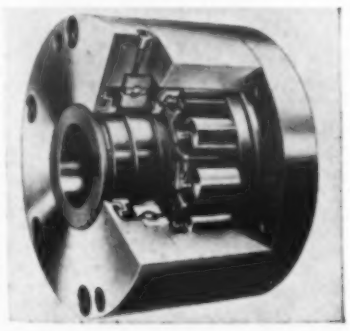
DriAire offers proven solutions to many of these problems. As the largest manufacturer of moisture control devices, DriAire welcomes any problems of humidity control and indication. Your inquiries are invited.

DRIAIRE DriAire INCORPORATED

SOUTH NORWALK, CONNECTICUT

▲ For more details circle NED-471 K4 on enclosed inquiry slip ▲

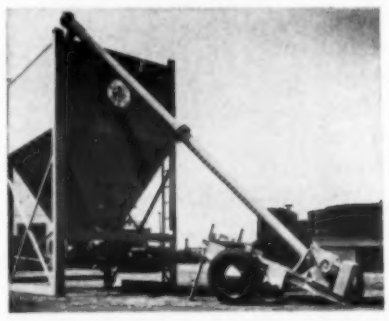
OVERRUNNING CLUTCHES for extra heavy duty service



Four standard sizes comprise line of series K extra heavy duty ball bearing overrunning clutches for indexing, backstop and machinery applications. Each has made-to-order bore and keyway sizes, the largest of which can be bored for shafts up to 5 in. diameter. Torque ratings for four models range from 1300 to 8000 lb-ft indexing, 2500 to 15,000 lb-ft general duty and 3000 to 20,000 lb-ft backstop. Typical applications are dual, two-speed, centrifugal water pump, and forced and induced fan drives. Tapped holes in both ends are for attaching sprockets, gears, pulleys or ratchet arms for drive requirements from 1300 to 6000 lb-ft. Desired direction of rotation is obtained by attaching component to either side of the clutches. Made by **Morse Chain Co.,** Dept. ND, 7601 Central Ave., Detroit 10, Mich.

▲ For more details circle NED-472 K4 on enclosed inquiry slip ▲

BULK HANDLING EQUIPMENT includes shipping container, giant hopper and 16-ft high feed conveyor



Line of equipment for handling barite, cement and other dry granular products includes the Ba-zooka two-screw product conveyor which adjusts to feeding heights of 6 to 16 ft; a steel plate shipping container; and a giant mud hopper with 540 cu ft capacity. The two-wheeled, trailer-type conveyor is powered by self-starting, two-cylinder Wisconsin engine. Its two-screw design, in which short cross screw feeds longer elevating one, allows feeding hopper to remain level at all times.

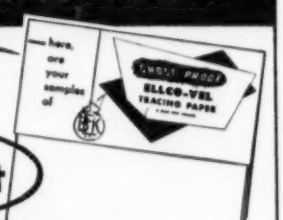
In oil well use, mud hopper will store 70,000 lb of dry mud for well drilling. As much as 3000 lb of bulk mud can be released into a well system in one minute by opening only one hopper valve. Hopper measures 14 x 9 x 7½ ft.

Shipping container which measures 5 ft 10 in. high and 38 in. wide and deep will hold 5000 lb of barite or cement. Dome-shaped top facilitates easy stacking, and rubber-cored gaskets assure water tightness. Unit has cable lifting lugs and can also be moved by fork lift truck. Equipment is made by **Delta Tank Mfg. Co.,** 8150-NE Florida Blvd., Baton Rouge, La.

▲ For more details circle NED-473 K4 on enclosed inquiry slip ▲

MAKE YOUR OWN TOUGH DRAWING-BOARD TEST!

Send for this FREE sample kit



GHOST-PROOF

ELLCO-VEL® TRACING PAPER

You can erase and erase this blue-tint as many as 5 or 6 times after repencilling. Pencil lines vanish completely and thoroughly. Not even the shadow of a ghost shows on white or blue prints. It's Ghost-Proof! But find out for yourself. Send for tough, durable ELLCO-VEL samples now.

B. K. ELLIOTT CO.

PITTSBURGH • DETROIT • CLEVELAND

WRITE DEPT. 51E • 126 SIXTH ST. • PITTSBURGH 22, PA.

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Now—Lock Your Feed Rates to Protect Machines . . . Reduce Costs with the CROSS Flow Control Lock!

Only authorized personnel carry a key for the Cross Flow Control Lock! They set machine feed rate, then lock it.

Easy to install. Just remove valve nameplate and adjusting lever, reinstall over lock mounting plate.

Available for Vickers ¼" flow control valves and remote control panels.

For full details, write Dept. A310.

- Eliminates Tampering
- Stops Costly Shutdowns
- Prevents Tool Abuse and Breakage
- Protects Machines Against Overloads
- Reduces Maintenance Costs

Established 1898

THE CROSS CO. DETROIT 7, MICHIGAN

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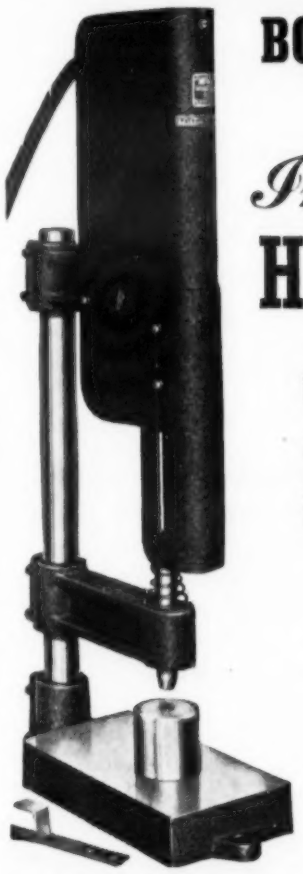


BOOST OUTPUT with *Impact* AIR HAMMER

the efficient modern method for

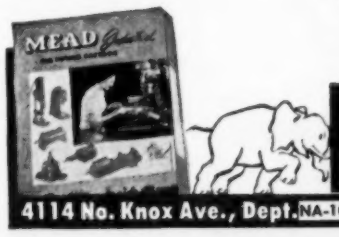
PUNCHING . . . . . RIVETING
ASSEMBLING . . . . EMBOSSING
FORGING . . . . . FORMING
PEENING . . . . . MARKING
CRIMPING . . . . . CUTTING
BLANKING . . . . . COINING

Ready . . . Mead's new air-powered Impact Hammer . . . weighing only 27 pounds . . . yet having a wallop like a pile-driver! One of its outstanding applications is multiple piercing of large metal sheets before or after forming. It can punch holes as close together as 1¾" on centers. Value of the impact readily adjusted from 4,500 pounds down to only a few ounces. Set ups are quick, easy. Besides innumerable punching operations, with suitable attachments it is capable of upsetting rivets, blanking out soft materials with knife dies, light coining, forging operations, etc. Get complete facts on this versatile, handy new tool and other Mead Air Power devices. Write for Catalog.

MEAD AIR OPERATED DEVICES save precious man-hours!

CATALOG READY

Send for copy of our new Air Power Catalog illustrating, describing many new man-and-money-saving devices.



MEAD SPECIALTIES COMPANY

4114 No. Knox Ave., Dept. NA-104, CHICAGO 41, ILLINOIS

▲ For more details circle NED-476 K4 on enclosed inquiry slip ▲

NEW

WORKBENCH TOP
... Resinwood

TOUGH
WARP-FREE
SPLINTER-PROOF

For All Industries

ShopTop quality is superior to maple — with up to 50% greater economy. Select kiln-dried cores, bonded under pressure and heat, provide a built-in impact cushion to give longer life. Smooth Resinwood facings resist acid, alkali, oil, and grease. For new or replacement work benches.

Made in any size to meet your requirements.

Available through selected industrial distributors in principal cities or write direct for sample and price list.

RIMCO — ROCK ISLAND MILLWORK COMPANY
RESINWOOD DIVISION
Established 1868 Rock Island 4, Illinois

For more details circle NED-478 K4 on enclosed inquiry slip

MERRILL
MATERIALS HANDLING
DEVICES

MERRILL BROTHERS
56-13 ARNOLD AVENUE
MASPETH, N. Y.

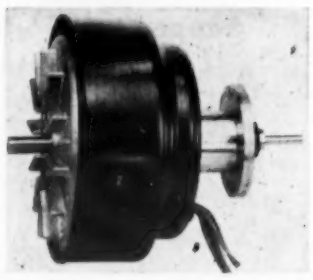
For more details circle NED-479 K4 on enclosed inquiry slip

STACKING TRUCK
extensible clamps grip loads

Rheem gripper arms are fitted to model RSEAT-2 Warehouser Extend-A-Load truck to permit it to handle a wide variety of loads without pallets. Contact surfaces of extensible gripper arms are coated with a durable high friction plastic for secure holding. Pressure regulator allows clamping pressure to be adjusted to load type and weight. Safety backrest aligns load above clamping position. Loads can be lifted up to 124 in. above the floor. Pushbutton control is used. Truck is battery-powered. Made by **Yale & Towne Mfg. Co.,** Yale Materials Handling Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-480 K4 on enclosed inquiry slip

SYNCHRONOUS MOTORS
for precision drive applications



Series of high and low speed direct-drive synchronous motors have speeds from 300 to 1800 rpm. Combining high torque rotor with flywheel and precision ground capstan, they are suitable for such precision applications as driving high fidelity magnetic tape recorders. Standard capstans and variety of motor speeds provide tape velocities of 1⅞, 3¾, 7½, 15 and 30 ips. Magnetic shield eliminates high-torque flux field from region of the capstan. Cooling impellers are mounted on the flywheel-rotor. Motors measure 5 7/16-in. diameter and extend 4 19/32-in. from the mounting surface. They are reversible and are supplied with single or dual speed windings for standard current. Made by **Technical Development Corp.,** Dept. N, 4060 Ince Blvd., Culver City, Calif.

For more details circle NED-481 K4 on enclosed inquiry slip

Transformers

Chicago Standard Transformer Corp. — Replacement and new equipment transformers stocked for radio, television, communications and other electronic applications are described and illustrated in 24-page 1954 catalog. Electrical and physical specifications for over 500 transformers are presented. Output transformer charts, cross reference charts and other data are included.

For more details circle NED-482 K4 on enclosed inquiry slip

MILL-ROSE Twisted Wire Brushes
offer a better way!

These twisted wire brushes are only a few of dozens MILL-ROSE has specially designed. If our catalog of 56 standard double and single spiral brushes does not include the brush you need — we'll design one for you.
Write for Catalog EQ-54

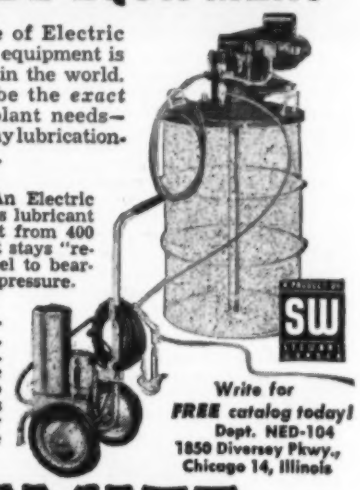
HIGH PRECISION MILL-ROSE INDUSTRIAL BRUSHES
THE MILL-ROSE CO.
1985 East 59th Street
Cleveland 3, Ohio

For more details circle NED-483 K4 on enclosed inquiry slip

From a portable power gun to the heavy duty barrel pumps for a plant-wide system... and everything in between!

ALEMITE ELECTRIC POWER LUBE EQUIPMENT

The Alemite Line of Electric Power Lubrication equipment is the most complete in the world. There is sure to be the *exact* equipment your plant needs—just right to solve any lubrication-protection problem.



Alemite Model 6735—An Electric Barrel Pump that pumps lubricant wherever needed, direct from 400 pound drums. Lubricant stays "refinery clean" from barrel to bearing. Up to 3,000 pounds pressure.

Alemite Model 7182-B—A portable power gun, the Electric Porta-Kart. Goes anywhere in the plant. Only 18" wide, so it navigates narrow aisles with ease. Brings power lubrication right to the machine!

Write for FREE catalog today!
Dept. NED-104
1850 Diversey Pkwy.,
Chicago 14, Illinois

ALEMITE
REG. U. S. PAT. OFF.

For more details circle NED-484 K4 on enclosed inquiry slip

Shock loads can't hurt this fluid motor

DENISON AXIAL PISTON FLUID MOTORS
Recommended for the toughest jobs ...without qualification.

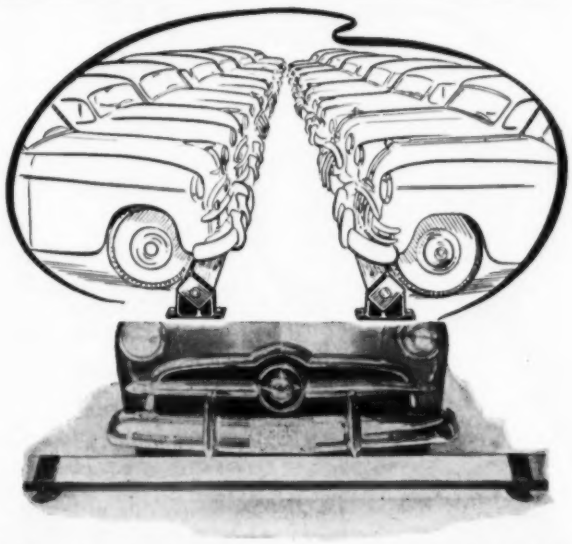
Ratings up to 180 hp, 5665 inch-pounds torque. For circuits to 5000 psi.

Get the facts. Send for Denison's Fluid Motor Bulletin FM-2. Write to: THE DENISON ENGINEERING COMPANY, 1151 Dublin Road, Columbus 16, Ohio.

DENISON Hydroil ics

PUMPS • MOTORS • CONTROLS • PRESSES

For more details circle NED-485 K4 on enclosed inquiry slip



SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. Castings are non-rusting aluminum alloy.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

For more details circle NED-486 K4 on enclosed inquiry slip

MARSHALLTOWN

Capacities from 18 Gauge to ½"
Cuts any SIZE . . . any SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

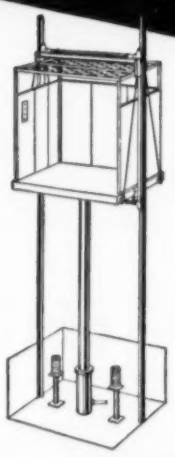
Built for extra heavy duty use. High grade tool steel cutters.

Write today for details and prices.

MARSHALLTOWN MFG. CO., Marshalltown 2, Iowa

▲ For more details circle **NED-487 K4** on enclosed inquiry slip ▲

MODERNIZE OLD ELEVATORS
with new Oildraulic equipment



There's no need to put up with worn-out, undependable elevator equipment that is slow, makes poor landings, and is not adapted to power truck loading.

How Rotary can help you

By modernizing under the Rotary Lift Co. conversion plan, you can speed up old elevators and cut operating costs. You also increase safety, which frequently reduces liability insurance rates.

Oildraulic equipment can be adapted to old overhead electrics, hand pull-rope elevators, or old hydraulics. Any parts of your present elevator that are still in good condition can be retained.

WRITE US for further information. On request our representative will survey your equipment and submit recommendations with cost estimate. It costs nothing to learn what can be done to modernize your elevator.

ROTARY LIFT CO., 1118 Kentucky, Memphis 2, Tenn.

Rotary®

Rotary Lift Co. specializes in modern Oildraulic elevators and lifts . . . over 75,000 now in service . . . backed by a coast-to-coast field organization.

▲ For more details circle **NED-488 K4** on enclosed inquiry slip ▲

VAPOR COLLECTOR
improved unit also collects solids

Paddle wheel self-clearing fan now incorporated in improved Dustkop VCS-2 vapor collector not only increases suction at source of mist and spray, but will clear itself of solids that may be present. On grinding jobs where solids are generated, such as automatic contour grinding of turbine blades on Pratt & Whitney grinders, units collect a combination of mist and grit as well as bits of string which wear off abrasive belt. Fan, direct driven by ⅓-hp continuous duty motor, develops rated 614 cfm with a 5-in. inlet. Collector requires 28-in. square mounting space and is usually located overhead so that condensate gravitates to machine sump. Made by **Aget-Detroit Co.**, 201 Main St., Ann Arbor, Mich.

▲ For more details circle **NED-489 K4** on enclosed inquiry slip ▲

CONVEYOR MERGING DEVICE
feeds two conveyor lines into one

Designed for use on parallel conveyor lines, various angle converging units and right angle transfers using belt, live roller or gravity system, the E-Z-Merger feeds commodities from two lines into one without interference. Position and length of arms on the mechanical unit can be changed in the field for various angles and package sizes. Conveyed items weighing from 2 lb up can be handled by adjusting tension. Device requires a space of 10 in. diameter, is about 4 in. high and can be raised or lowered to suit the application. Unit will not lock if two boxes contact the arms at the same time, as one is given preference. Made by **Standard Conveyor Co.**, Dept. HD, 831 E. Seventh St., North St. Paul 9, Minn.

▲ For more details circle **NED-490 K4** on enclosed inquiry slip ▲

Hardness Testers

American Chain & Cable Co., Wilson Mechanical Instrument Div.—Engineering data, uses and design features of complete line of Rockwell hardness testers are found in 50-page series of bulletins bound together in a folder. Normal hardness testers, superficial hardness testers, accessory and special tester and micro and macro hardness testers are detailed.

▲ For more details circle **NED-491 K4** on enclosed inquiry slip ▲

Moderate priced VALVENT
Roof Ventilators fill many needs

In hundreds of places—for "hot spots" in large or small buildings—the VALVENT fills the need for a simple economical roof ventilator.

Gravity Model

Powered Model

Sturdy galvanized steel construction; pleasing appearance; efficient air-flow design, weather-tight. Unusually effective fan unit in powered models. Wide selection of sizes and capacities. Bases to fit any roof type.

Write for full information on VALVENT Ventilators

18511 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Roof Ventilators and Ventilating Louvers

POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

▲ For more details circle **NED-492 K4** on enclosed inquiry slip ▲

FOR RUGGED DEPENDABILITY

There's no caster job too tough for the rugged, heavy-duty Hamilton Air-Flo!

Cast steel top plate and yoke—heavy plate steel legs—1" diameter king bolt—double raceways, precision machined—wide-faced roller bearing wheels—hardened and ground spanner bushings—these are some of the features that make Air-Flo the dependable caster buy. Wheel sizes from 5" to 10" diameter—semi-steel, rubber-tired or molded plastic.

The Air-Flo is just one of many types of Hamilton casters—a model and size for almost every industrial purpose. Ask for catalog showing the complete line.

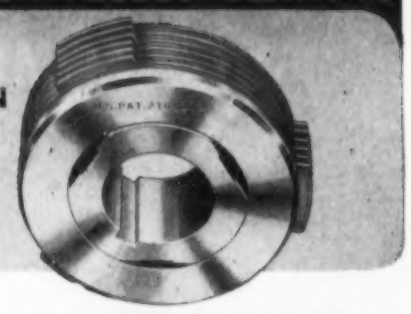
THE HAMILTON CASTER & MFG. CO.
1659 DIXIE HIGHWAY, HAMILTON, OHIO

▲ For more details circle **NED-493 K4** on enclosed inquiry slip ▲

New

FOR MACHINE...PRODUCT DESIGNERS

BUILD YOUR OWN CLUTCH WITH THE



MAXITORQ "DISC-PAC"

Due to a growing demand for Maxitorq Floating Discs, we now introduce the Maxitorq Disc-Pac . . . a self-contained unit independent of the actuator. Patented Maxitorq Separator Springs prevent heating in neutral . . . Locking Plate locks all discs onto body.

Thus you may build your own clutch (or brake) from our stock parts. Disc-Pac keys to shaft . . . easily replaced. Available in 8 diameters, 2" to 8", ¼ to 15 h.p. Disc-Pac fits Maxitorq Driving Rings, if you wish to use them. Write Dept. NE-10 for full specifications and prices.

THE CARLYLE JOHNSON MACHINE COMPANY
2CJ54 MANCHESTER, CONNECTICUT

▲ For more details circle **NED-494 K4** on enclosed inquiry slip ▲

Bulletin 609 Manual Starters

- Silver alloy contacts need no maintenance
- Generous wiring space in white interior

An Allen-Bradley Bulletin 609 across-the-line starter saves maintenance time on any machine. Contacts never need cleaning, filing, or dressing—they're always ready for action. Strongly built for years and years of trouble-free operation. Thermal breakers provide reliable motor overload protection. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

▲ For more details circle **NED-495 K4** on enclosed inquiry slip ▲

NEW FROM MORSE!

unusually compact

CAM CLUTCH!

- Backstops, indexes, overruns
- Simple
- Easily Installed
- Same OD's as 200-series bearings

Simplicity of design, ease of installation and maintenance make Morse 200-Series Cam Clutches as readily adaptable as bearings to numerous industrial applications. Ground to the same outside diameters as 200-series bearings, they will fit housings bored to accommodate these common bearing sizes.

The Morse 200-Series Cam Clutch combines maximum torque capacity with minimum space requirement. It is a self-contained assembly, furnished without inner races, and can be mounted directly on shafting. Clutches are furnished prelubricated, ready for immediate installation.

Get more details. Send today for Morse Catalog C 12-54.

Morse Chain Company
7601 Central Avenue
Detroit 10, Michigan

MORSE

▲ For more details circle **NED-496 K4** on enclosed inquiry slip ▲

PROTECT YOUR HYDRAULIC SEALS with the IMPROVED

Here is a BETTER WAY to insure long life for cylinder rod packings, bearings, machine spindles, guide pins.

Seal-Guard's flexible bronze, knife-edge wiping rings mould themselves to the shaft contour . . . peel off dirt and grime . . . lift it entirely away from the shaft—no packing or crowding under.

- **No chance of fouled bearings or packing.**
- **Can't damage shaft surfaces.**
- **Seal-Guards are available to fit rod diameters from ½ to 10 inches. Other sizes by special order.**

Write for descriptive literature.

HYDRAULIC ACCESSORIES CO.
24301 Hoover Rd. Van Dyke, Mich.

▲ For more details circle **NED-497 K4** on enclosed inquiry slip ▲

If You Need
SMALL PARTS IN A HURRY
plus sound engineering service
YOU CAN'T BEAT GARRETT!

SPRING LOCK WASHERS

Garrett Controlled Tension spring lock washers assure greater holding power, longer life of every assembly. Garrett makes a complete line of lock washers to ASA and SAE specifications, plus many special types . . . in all metals and plated to your requirements.

FLAT WASHERS

Garrett gives you fast delivery from stock on the largest line of flat washers available. Precision-made in thousands of different sizes and types—standards and specials. Also made to your exact specifications to meet the individual needs of your product.

HOSE CLAMPS

AN 737 . . . stainless steel, radial type with floating bridge and thumb-screw adjustment. Approved for aircraft use.
GS-100 & AN-743 . . . worm-type, self-locking screw. Plated to prevent corrosion. Approved by Armed Forces.
AUTO-SEAL . . . screw-type adjustment, scarfed tongue prevents punching. Staked bolt and captive nut. Rustproofed.

STAMPINGS

Quick deliveries on small and medium stampings made to your specifications on automatic, high-speed precision presses. Finishing equipment includes tumbling, polishing, heat treating and plating.

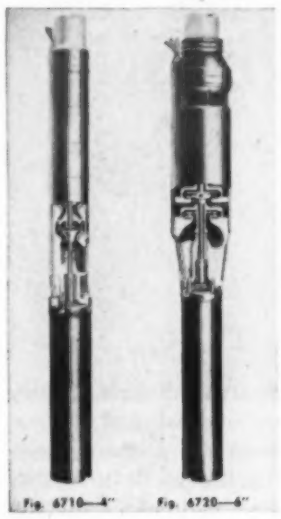
MAIL THIS COUPON
Please send me without obligation complete data and technical details on Garrett parts.
NAME
COMPANY
ADDRESS
CITY

Manufactured by
Garrett
OF PHILADELPHIA

GEORGE K. GARRETT COMPANY, INC. PHILA. 34, PA.

▲ For more details circle **NED-498 K4** on enclosed inquiry slip ▲

SUBMERSIBLE TURBINE PUMPS have 10 to 121 gpm capacities



Corrosion-resistant submersible turbine pumps are designed for use in 4-in., 6-in. or larger wells. Capacities are from 10 to 121 gpm at lifts up to 280 ft. Moving parts are water cooled and water lubricated. Windings are permanently enclosed in stainless steel case. Durable waterproof neoprene cable is connected with watertight fitting. Installation is simple, since motor and pumping unit are factory assembled ready for placing in well. If desired, tank and control can be located away from well. Riser pipe can then be buried below frost line so that complete installation is protected from frost and tampering. Made by **Deming Co.**, Dept. NE, Salem, O.

▲ For more details circle **NED-499 K4** on enclosed inquiry slip ▲

STEAM TRAP handles variable loads and pressures

Bucket-type Uni-Trap steam trap employs a balanced valve principle and operates automatically through complete range up to 250 psi. Trap is available in pipe sizes from ½ through 2 in. Internal parts are stainless steel, with valves and seats of 500 Brinell hardness. Either standard bottom inlet and top outlet or in-line types are available. Latter can be repaired without removal from steam line. Trap capacities range from 0 to 55,000 lb/hr condensate. Inset in illustration shows dual valve which makes possible universal application. Made by **Perfecting Service Co.**, Dept. D, 332 Atando Ave., Charlotte 6, N. C.

▲ For more details circle **NED-500 K4** on enclosed inquiry slip ▲

Conveyor Design

Food Machinery & Chemical Corp.—24-page illustrated catalog "FMC Power Conveyor" describes and illustrates types of belt conveyor design and applications. Channel, unitized formed rail and angle iron frame types are included, with bearing details, roller construction and specifications shown. Types of box stops, intersections, diverters, floor track and live roll conveyors are also shown, in addition to gravity conveyors and other materials handling equipment.

▲ For more details circle **NED-501 K4** on enclosed inquiry slip ▲

Kleenslot THE IDEAL SCREEN FOR DEWATERING AND SIZING!

Cross section at left shows how KLEENSLOT Screens operate on a non-clogging principle.

IT CAN BE ADAPTED TO FIT ANY MAKE OF VIBRATOR. It is not necessary to change your present machine to accommodate our screen.

KLEENSLOT WEDGE WIRE VIBRATOR SCREENS are of quality construction and built to give maximum long-life service. The rigid construction and method of installation prevents "whipping".

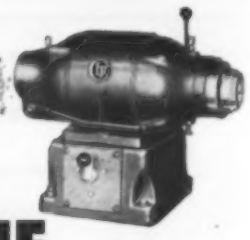
The wedge shape of the screen wire with its non-clogging, non-blinding features permits perfect separation on wet or dry screening and the rigid construction adds considerable to its capacity and efficiency when used in vibrator applications.

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
GAS ST. AT NICKEL PLATE R.R., WELLINGTON, OHIO

▲ For more details circle **NED-502 K4** on enclosed inquiry slip ▲

The Cincinnati



HOLLOW SPINDLE
SPEED LATHE

A Name Among Names that Stands for Fast, Versatile, Flexible Burring and Finishing

Regardless of what you call it — Burr Head, Reamer Driver, Burring and Reaming Machine, or Speed Lathe — the results to small parts producers is the same; satisfactory results in the form of better finishing. Hollow spindle construction means it's especially adaptable to tubing and bar stock, in a wide range of sizes. Why rob production time from make-shift, adapted machines designed and needed for other operations? The Cincinnati Speed Lathe offers a range of types, voltages, speeds and capacities. It's available for pedestal installation, too.

Quality Equipment Since 1902

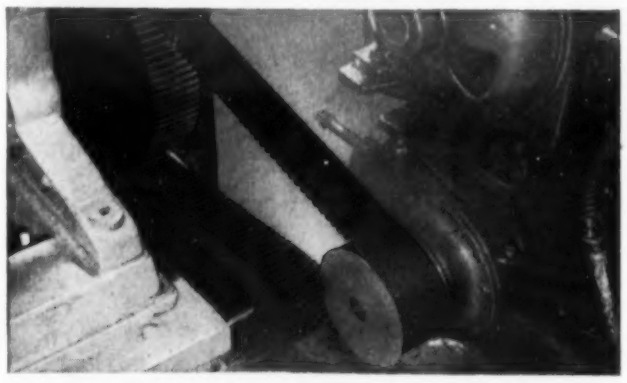
Profit from the complete story. Write for Catalog 54-AD

TRADE The Cincinnati MARK

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
2698 Madison Rd., Cincinnati 8, Ohio

▲ For more details circle **NED-503 K4** on enclosed inquiry slip ▲

- *for low-cost speed reduction*
- *for high-efficiency drives, even at high ratios*
- *for quiet, non-slip drives*
- *for high-speed drives*
- *for low-maintenance drives*



GET THE ORIGINAL
Gilmer "TIMING" BELT STOCK DRIVES
from your NYB&P Distributor

WHETHER you want to step down the output of a high-speed motor . . . assure a fixed speed ratio between two or more shafts . . . or simply obtain a quiet, flexible, positive drive that needs no lubrication, your best bet is a Gilmer "Timing" Belt *stock drive!*

Here are some reasons why more than a million of these revolutionary toothed-belt drives are now in use:

CAN'T SLIP—Positive engagement of the "Timing" Belt's teeth with axially-cut pulley grooves assures no slippage, no creep, no power loss, precision control of speed ratio.

STRONG, LIGHT, FLEXIBLE—A single layer of continuously-wound, neoprene-encased, steel cable of high tensile strength gives the "Timing" Belt highest strength-to-weight ratio, with extreme flexibility. No stretch; no take-up. Range: to 50 hp from stock.

NO INITIAL TENSION—Teeth, not friction, provide the grip . . . reducing bearing loads and eliminating need for out-board bearings.

NO LUBRICATION—Absence of metal-to-metal contact eliminates need for lubricants, lubricating devices and housings. High speeds cause no lubricating problems.

ULTRA COMPACT—Very small pulleys can be used without slippage, permitting very short centers and high ratios.

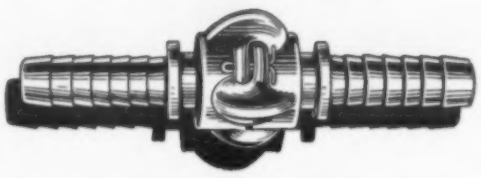
SPEED RANGE—Operates without slippage at speeds of inches per day to 15,000 fpm. Mechanical efficiency is very close to 100%.

Ask your local NYB&P Distributor for a copy of the Gilmer "Timing" Belt STANDARD DRIVE MANUAL or use the request form to obtain a copy of the Manual and location of nearest stock-carrying distributor.

NYB&P NEW YORK BELTING & PACKING CO. 1 Market St., Passaic, N. J.
America's Oldest Manufacturer of Industrial Rubber Products

▲ For more details circle **NED-504 K4** on enclosed inquiry slip ▲

"AIR KING"



QUICK-ACTING, UNIVERSAL TYPE

HOSE COUPLING

A strong, durable coupling for quick, tight connections on field or factory air hose. Plain design—no parts to get out of order or clogged with dirt. Made in hose ends and male and female threaded pipe ends. Completely interchangeable. Patented safety locking device is proof against vibration and rough handling. Malleable iron (rust-proofed) or bronze.

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.

PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS

"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"

PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

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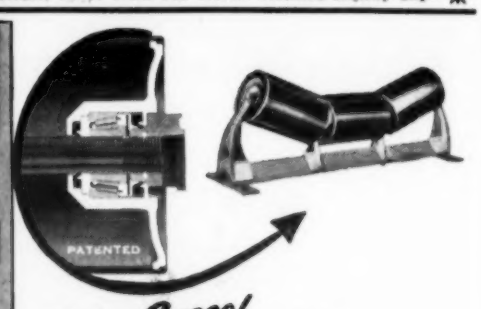


Saves Grease! Saves Labor! Saves Belts!

If You Use Belt Conveyors You Need

CONTINENTAL IDLERS

• UNIT-SEALED
• TIMKEN BEARINGS
• PRE-LUBRICATED

Write for Bulletin NED-116

ALL SIZES! ALL TYPES! CG-5301

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

▲ For more details circle **NED-506 K4** on enclosed inquiry slip ▲

SHEAR SHEET METAL *faster*—

Frederick FRECUT FOOT SHEAR

Model No. 1836

Frecut features a wider holddown, with wider feet, to insure more accurate shearing. Correct leverage means capacity shearing with less operator fatigue. Two gauges . . . front and rear . . . plus an angle gauge, are standard equipment on the Frederick Frecut.

Rugged and durable, the Frecut is priced for factory or job shop operation. Proved in operation by daily use in many plants. Ready for prompt shipment. Write direct for illustrated, descriptive literature and prices.

BUYING DATA

Cap.—18 ga mild steel
Cutting length.....36"
Width of Bed.....14"
Overall height....41"

FREDERICK IRON & STEEL, INC.
MACHINERY DIVISION
FREDERICK *Established 1790* MARYLAND

PRODUCERS OF CENTRIFUGAL PUMPS
WRECKING BALLS • MUNICIPAL INDUSTRIAL CASTINGS

▲ For more details circle **NED-507 K4** on enclosed inquiry slip ▲

OUTWARD CLINCH STAPLER
speeds tagging, attaching insulation

Designed for use with cardboard, corrugated board and fabrics, model CT-851-OC outward clinch stapler handles such jobs as attaching tags and labels, closing boxes and securing insulation around piping. Either 3/8 or 1/2-in. staples are used, driven outward and upward in a clinching action by a special front jaw attachment. Inset portion of illustration shows this action. Made by **Fastener Corp.**, 876 Fletcher St., Chicago 14, Ill.

▲ For more details circle **NED-508 K4** on enclosed inquiry slip ▲

ELECTRICAL WIRING CHECKER
portable unit operates automatically

Based on continuous scanning circuitry, automatic electrical wiring inspection system consists of self-contained Master and Slave portable units. It is designed for testing control cables, transmission lines, instrument and control panels, feeder and branch circuits, thermocouple leads and communication lines. Conductors are scanned at rate of 1 per second and standard unit will check insulation resistances to 110 megohms at 350 v dc. System is also used to locate shorts and automatically "ring-out" multiple circuits. On a group of 100 wires, 10,000 tests of interconductor insulation resistance and insulation resistance to ground are performed in 200 seconds. Made by **Panellit, Inc.**, Panascan Div., 7421 N. Hamlin Ave., Skokie, Ill.

▲ For more details circle **NED-509 K4** on enclosed inquiry slip ▲

Zirconium Up-To-Date

Carborundum Metals Co.—Concise compilation of information about history and production of zirconium is contained in 68-page pocket size booklet "Facts About Zirconium." Mechanical, physical and chemical properties; facts about fabrication; and data on melting, forging, rolling, welding and machinability are discussed. Appendix lists data on crystallographic features, atomic and nuclear properties, etc.

▲ For more details circle **NED-510 K4** on enclosed inquiry slip ▲

Sensational NEW *features*

FOSTORIA LOCALITE

The Perfect Lighting Tool for Machine Assembly Inspection

Directs Light Exactly as Needed

MODEL 2-WX-700
Overall Length 31"

$8.12 Each in std. pkg. of 8 Less $10.50 ea.

Reflector—New bell ventilated shape with 5½" orifice. Rotates 360°. Accommodates 100 watt A-21 or R-30 lamps. Also PAR-38, R-40, RS-40. Available with lens, if desired.

Arm Joints — New patented tension disc design. Easy, smooth action with only one hand. Available with 1, 2 or 3 arms.

Base—Universal for vertical or horizonal mounting. Also adaptable to outlet boxes. Collet revolves 360°.

Wiring—Medium screw porcelain socket. "T" rated toggle switch. 8 ft. POT-32 18-2 heavily insulated oil resistant wiring with molded plug.

Finish—Gray baked enamel. Reflector interior, high temperature White.

WRITE for complete catalog of Localite models for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION
Fostoria, Ohio
Localites available through wholesalers everywhere

LOCALITE fostoria for Light ON the Job

▲ For more details circle **NED-511 K4** on enclosed inquiry slip ▲

RESTORE GALVANIZING DAMAGED by WELDING

• *Quickly*
• *Permanently*
• *Economically*

with

AMCO galvanizing repair compound

● It takes only a simple operation to repair galvanized surfaces damaged or marred by welding. AMCO Galvanizing repair Compounds—stick or powder—provide a permanent coating equal to the original. And it's done without hurting the surrounding area. No special tools or skills are required.

AMCO Compounds provide fast, on-the-spot base metal protection. Meet U. S. Government Specifications.

Get the complete story. Write for descriptive literature.

AMERICAN SOLDER and FLUX CO.
Dept N
19th & WILLARD STS., PHILADELPHIA 40, PA.

▲ For more details circle **NED-512 K4** on enclosed inquiry slip ▲

THE SCREEN'S THE THING THAT MAKES THE STRAINER

■ A high-grade woven Monel wire screen is the heart of the Yarway Fine Screen Strainer—one reason why hundreds of thousands of Yarways police the pipelines in nearly every industry, stopping rust, scale and dirt from clogging vital equipment.

Another reason why it pays to select Yarways—strainer screens come out with cap when removed from body. Eliminates costly time delays in fishing out old screens from strainer bodies.

More reasons—superior finish to prevent rust and for better appearance; straight threads, machined faces and spark-plug-type gaskets on screen caps; ten sizes from ½" to 3".

Yarway Strainers are stocked for IMMEDIATE DELIVERY by 250 local distributors. Write for Bulletin S-203.

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.

YARWAY *fine screen strainers*

▲ For more details circle **NED-513 K4** on enclosed inquiry slip ▲

Eliminate Shipping Labels!

PRINT DIRECT

Speeds Up Freight Marking

Quick! Accurate! Easy! Print shipping information direct on cartons, boxes, packages. Eliminate double operation of preparing labels and then pasting them to the containers. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. New FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil. Then type or write in address or identification data . . . attach to duplicator . . . and print, like using a rubber stamp. Write for Literature and FREE SAMPLE FORM-CUT STENCIL AND PRINT.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

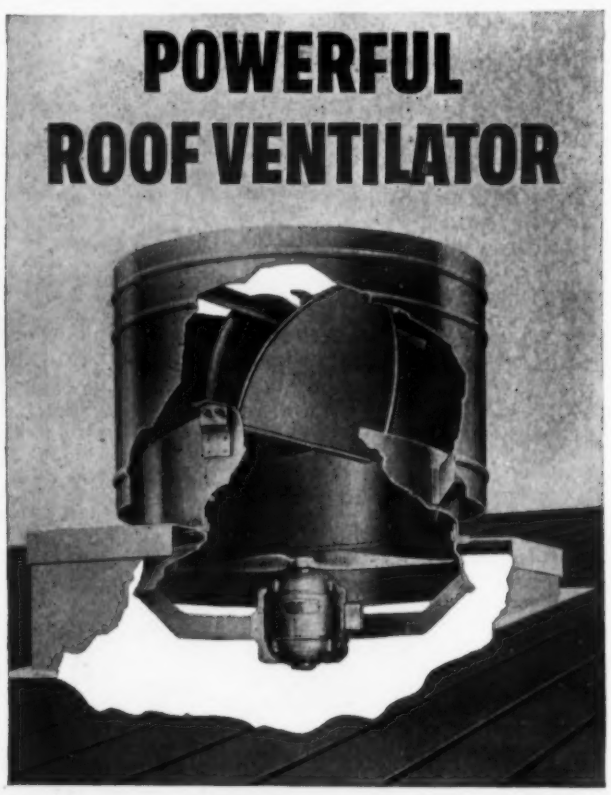
Also for addressing shipping tags and labels . . . prints postcards, menus, forms, bulletins. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). At office or shipping room supply dealers.

OVER 30 YEARS MULTISTAMP STENCIL DUPLICATOR®

MANUFACTURED ONLY BY THE MULTISTAMP CO. NORFOLK, VIRGINIA

▲ For more details circle NED-514 K4 on enclosed inquiry slip ▲

POWERFUL ROOF VENTILATOR



PROPELLAIR

SKY-BLAST®

2820 to 78800 CFM Certified Air Delivery

This powerful roof ventilator with famed airfoil propeller scoops up heat, moisture, dust, fumes . . . blasts them high into the outside air. Powered by Robbins & Myers *All-Weather* Motor, the Propellair Sky-Blast is dependable, economical, efficient and maintenance-free.

Certified Ratings PFMA

SKY-BLAST FEATURES

- Constant performance regardless of winds
- Easy to install on all roofs
- Patented leak-proof automatic butterfly damper assembly
- Rugged all-steel galvanized construction
- Low silhouette for minimum roof stress
- Backed by more than 20 years of research and engineering

Write for Bulletin 680-N

R&M PROPELLAIR® DIVISION OF ROBBINS & MYERS, INC. SPRINGFIELD · OHIO

Man Cooler Direct Drive Tubeaxial Vaneaxial Extended Shaft

▲ For more details circle NED-515 K4 on enclosed inquiry slip ▲

SMALL GEAR-MOTORS

right-angle and concentric-shaft units offered in 1/4 to 3/4-hp ratings

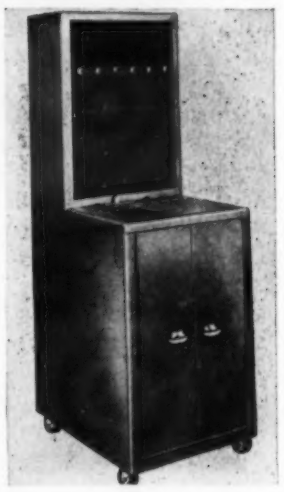
Fractional - horsepower gear-motors in both right-angle and concentric-shaft designs are 10 per cent lighter than previous models. Driving motor is close-coupled and positively-geared to output shaft for maximum torque transmission, uniform speed and no slippage. Motors are reconnectable externally to reverse direction of shaft rotation.

Both models are intended for such applications as driving machine tools, pumps, printing equipment, conveyors, strip feeders, material handling equipment and display devices. They are available in ratings of 1/4, 1/3, 1/2 and 3/4-hp and operate on 115/230 v single-phase and 220/440 v three-phase. Concentric-shaft units range in output speed from 13.5 to 520 rpm, while right angle shaft gear-motors range from 24 to 148 rpm. Made by **General Electric Co.**, Schenectady 5, N. Y.

▲ For more details circle NED-516 K4 on enclosed inquiry slip ▲

DIRECT-WRITING OSCILLOGRAPH

allows simultaneous recordings of variety of transient variables



Exceptionally high, stable direct or alternating current amplification is provided by type M Dynograph recorder. This high speed, direct-writing oscillograph can be used with reluctance type pick-ups without auxiliary equipment. Highly sensitive unit requires only 150 microvolts dc per centimeter of pen deflection. It is absolutely nondrifting and pen response is 1/120-second. Over 8 cm of pen excursion is available in the unit, with linearity of 1 per cent up to 4 cm.

Versatility of the Dynograph allows simultaneous direct recordings of such transient variables as temperature, speed, position, pressure, acceleration, vibration and strain. Unit is housed in mobile, metal console and features individual plug-in amplifiers. By means of input panels it provides all connections necessary for variety of signal pick-ups. Made by **Offner Electronics Inc.**, 5322 N. Kedzie Ave., Chicago, Ill.

▲ For more details circle NED-517 K4 on enclosed inquiry slip ▲

now . . . more important than ever . . .

the efficiency, economy and dependability of Wells Heavy-Duty Cut-Off Saws

SEARCHING for a way to reduce metal cut-off costs? Here's an answer—the Wells No. 12 Saw. It's a heavy duty, hydraulically operated saw with automatic cutting cycle designed to step up production with greater accuracy. Capacity is 12" x 16", rectangular, 12¾" dia., rounds. Ask your Wells Dealer for full information or write direct.

SEE US AT THE METAL SHOW

Wells®

The Pioneers of Horizontal

METAL CUTTING BAND SAWS

• WELLS MANUFACTURING CORP. •

1313 HARDING ST. • THREE RIVERS, MICH.

▲ For more details circle NED-518 K4 on enclosed inquiry slip ▲

Here's how to

STOP CORROSION

in your plant!

Don't let corrosion take a bite out of your investment in plant and equipment. Stop it now with Pitt Chem Cold Applied Tar Base Coatings. They're tough. They're durable. They're economical and easy to apply. No other material does such a complete job of protection at so little cost.

The free booklet shown above tells you how, where and when to apply Pitt Chem Tar Base Coatings.

Write for your free copy today! WAD 5013

PROTECTIVE COATINGS DIVISION

PITTSBURGH COKE & CHEMICAL CO.

GRANT BLDG., PITTSBURGH 19, PA.

▲ For more details circle NED-519 K4 on enclosed inquiry slip ▲

SUPER-PRECISION BALL BEARINGS

For unexcelled protection, Fafnir Super-Precision Bearings are wrapped in aluminum foil. To command special care in handling, they're packed in gold-colored cartons.

For applications requiring high speeds, extreme accuracy and rigidity in such equipment as high grade machine tools, woodworking machines, jet engines, sensitive precision instruments etc., Fafnir manufactures a complete line of bearings in extra-precision tolerances. For details write the Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL BEARINGS MOST COMPLETE LINE IN AMERICA

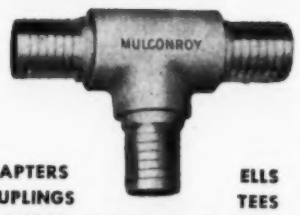
▲ For more details circle NED-520 K4 on enclosed inquiry slip ▲

METAL FITTINGS

For Flexible

PLASTIC PIPE...

Made exactly for Plastic Pipe Sizes. Assure easily-made, efficient, durable connections on every type of installation. Electroplated steel or Brass. *Ask your Distributor, or write for illustrated folders.*



ADAPTERS ELLS COUPLINGS TEES WELL-SEAL ELLS and PRIMING TEES • VENTURI JET ADAPTERS UNDERGROUND SPRINKLER ELLS AND TEES • WATER MAIN ADAPTERS, ETC.

"MULCONROY *Starts...* WHERE OTHERS *Stop!*"

MULCONROY COMPANY Since 1887

5331 JEFFERSON ST., PHILADELPHIA 31, PA.

▲ For more details circle NED-521 K4 on enclosed inquiry slip ▲

"Retains flexibility—resists abrasion" says Redmond Company of TEMFLEX* 105 TUBING

In making field connections for the TRI-FLUX shaded pole motors built by Redmond Company, Inc., Owosso, Mich., Temflex 105 Tubing is slipped over the lead from one field coil, which is then twisted together with the next coil lead. Wires are welded and bent back; the tubing is drawn over the welded joint, and the field varnished and baked. "Temflex 105 resists baking heat, offers high dielectric strength, flexibility and resistance to abrasion," says Redmond.

Literature and samples of this Irvington extruded plastic tubing—approved by Underwriters' Laboratories for continuous operation in air at 105° C. . . . and for 90° C. *in oil* . . . are yours for the asking. *T. M. Reg. U. S. Pat. Off.

IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
14 ARGYLE TERRACE, IRVINGTON 11, N. J.
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle NED-522 K4 on enclosed inquiry slip ▲

Lightweight Vise that's also a Work Bench...it's RIDGID Tristand

Tray pushes up easily to fold Tristand, pushes down easily to set up. Holds stand rigid.

...with built-in folding tray

Stand and tray are all one unit—no loose parts. Quick easy set-up and take down. Extra-light weight but strong, rigid. Full size vise base—3 benders, ceiling brace screw, pipe rest, lots of tool slots. An unbeatable value—see it at your Supply House!

Folds up for easy carrying to job and it's extra lightweight.

The Ridge Tool Company • Elyria, Ohio, U.S.A.

RIDGID Work-Saver Pipe Tools

▲ For more details circle NED-523 K4 on enclosed inquiry slip ▲

WHITEPRINTING MACHINE prints at rate of 40 fpm

Automatic tracing separation is feature of the one-step automatic Challenger whiteprinting machine. Printer and developer are synchronized to produce up to 42-in. wide prints at 1 to 40 fpm. Light source is a G-E 4000-w mercury vapor lamp, controlled by a constant wattage transformer. Other features are large Formica feed table, front and rear print delivery, print stacking at front and rear, electronic speed control, metered ammonia control and use of full strength commercial type ammonia. Front and rear windup device is an optional accessory. Made by **C. F. Pease Co.**, 3973 N. Rockwell St., Chicago 18, Ill.

▲ For more details circle NED-524 K4 on enclosed inquiry slip ▲

DUST COLLECTOR centrifugal wet type unit built to suit application

Dust control problems which involve high temperature or moisture; explosive or combustible dusts; corrosive, highly abrasive and/or obnoxious dusts; or combinations of these materials can be solved with type CW-1 centrifugal wet dust collector. It is of counter-current design (air flow counter current to water flow) and of tower type construction. Diameter varies in proportion to air volume handled and number of wet vane sections is governed by application requirements.

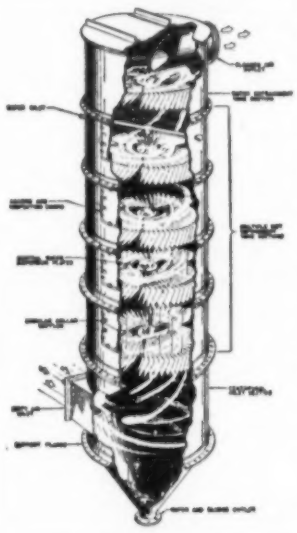
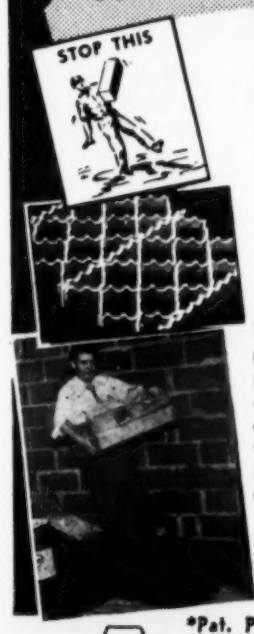


Illustration shows four wet vane sections, followed by a single water entrainment section. Water enters above top wet vane and flows downward or counter to upward flowing air which enters through a lower tangential inlet. Water and dust are discharged as sludge from the lower cone and clean air from the top. After settling, water can be reused. Made by **Pangborn Corp.**, 140 Pangborn Blvd., Hagerstown, Md.

▲ For more details circle NED-525 K4 on enclosed inquiry slip ▲

THE FIRST TRULY ENGINEERED SAFETY GRATING SOLVES SKIDDING PROBLEMS



Positive Footing

Bustin FIRM-GRIP

- Cuts Down Accidents
- Eliminates Danger Spots
- Improves Efficiency

Tested and proven—Bustin Firm-Grip prevents skidding even when completely covered with grease, graphite or wax, yet it is *unbelievably* comfortable to walk on. (It can even be walked on in stocking feet). Write for literature describing this Unique Safety Grating.

Where other grating products fail . . . try BUSTIN FIRM-GRIP for positive results.

*Pat. Pending

Bustin Write for Complete Literature
FIRM-GRIP GRATING CORP.
Dover, New Jersey Dover 6-8800

"BUSTIN—Designers and Manufacturers of Metal Products Since 1928"

▲ For more details circle NED-526 K4 on enclosed inquiry slip ▲

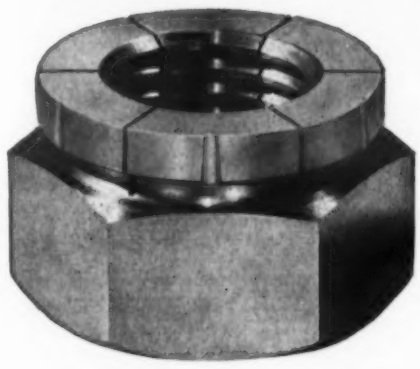
SAVE HOURS *in finishing time with* LIQUAMATTE *wet blasting*

Tools, dies, molds, engine parts, etc. requiring 1 to 6 hours to finish by hand methods are now finished in from 30 seconds to 10 minutes in a Liquamatte Wet Blasting Machine. It produces close tolerance finishes mechanically at high speeds that previously have been impossible to achieve except by hand methods. For example, at the Oling Tool Company, a Liquamatte is saving an average of 50% on former time and labor requirements for surfacing tools prior to plating. On some items, such as drill bits, savings as high as 80% have been effected. Send for Bulletin 43 for the complete story.

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-527 K4 on enclosed inquiry slip ▲

they're ONE piece, ALL metal...



no parts to work loose or get lost

Because they are one piece—nothing to assemble, come apart, lose or forget—FLEXLOC locknuts save production time. Because they are all metal, they lock and stay tight at higher temperatures. See your local industrial distributor for literature and samples or write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

FLEXLOC LOCKNUT DIVISION **SPS** JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-528 K4 on enclosed inquiry slip ▲

Handles anything up to 12 feet!

Save Draftsmen's Time
YOUR TYPIST CAN DO THE JOB BETTER

The Vari-Typer lettering machine is the fastest and most economical method of lettering specifications on tracings and drawings. No more tedious time-consuming lettering operations requiring expensive time of skilled draftsmen.

The Vari-Typer lettering machine is four to five times faster than hand lettering and is operated by an office typist. Every letter and figure is uniformly clear and distinct. Instantly changeable type, with hundreds of different styles to choose from in sizes ranging from 6 pt. to 18 pt. Write today for information.

Vari-Typer Lettering Machine

Body copy produced on DSJ Model. Headlines photo-composed on the Headliner.

RALPH C. COXHEAD CORP.
720 Frelinghuysen Avenue
Newark 5, N.J.
Please send Vari-Typer Book E-14
NAME.....
COMPANY.....
ADDRESS.....
CITY.....ZONE...STATE....

▲ For more details circle NED-529 K4 on enclosed inquiry slip ▲

DERBY "152"

A DERBY FIRST
Stainless steel cut-off blade, guaranteed for life of machine.

MOST TALKED ABOUT GUMMED TAPE DISPENSER ON THE MARKET!

Derby spent 2 years designing, building and testing the fabulous Super "152". It's a rugged, efficient, gummed tape dispenser with so many big machine features, so many unusual Derby exclusives, that its low price is truly sensational! Dispenses 1" to 3" width tapes in predetermined lengths up to 30".

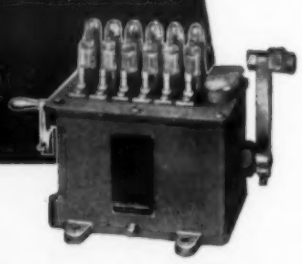
See your dealer or write Dept. NED

DERBY SEALERS INC. Derby, Conn.

▲ For more details circle NED-530 K4 on enclosed inquiry slip ▲

For Positive Automatic Machine Lubrication use

HILLS-McCANNA FORCE FEED LUBRICATORS



● Hills-McCanna Force Feed Lubricators are specially designed oil line pumps that provide a positive automatic flow of oil to even the most difficult-to-lubricate spots. Available in open or enclosed types in sizes from 2 to 32 pints with 1 to 48 feeds. Oil flow through the lubricator is exactly controllable to meet your specifications. For complete information, write for catalog L-3. Hills-McCanna Co.— 2455 W. Nelson St., Chicago 18, Ill.

HILLS-McCANNA
force feed lubricators

Also manufacturers of Saunders patent valves • chemical proportioning pumps • magnesium alloy sand castings

▲ For more details circle NED-531 K4 on enclosed inquiry slip ▲

Keeps Clothes Fresher! penco

"AIR-LITE" LOCKER

The steel locker that "breathes" through ¾" mesh door openings—an exclusive Penco feature!

- MAXIMUM NATURAL VENTILATION
- DAMP CLOTHES DRY FASTER
- CONTENTS CAN BE INSPECTED—WITHOUT OPENING DOOR
- SAFE, PILFER-PROOF STORAGE
- PENCO QUALITY CONSTRUCTION
- SINGLE AND DOUBLE TIER TYPES —IN A WIDE RANGE OF SIZES

Send for complete locker catalog

85TH YEAR OF SERVICE

PENN METAL Corporation of Penna.
82 OREGON AVE., PHILA. 48, PA.

▲ For more details circle NED-532 K4 on enclosed inquiry slip ▲

MACHINERY MOUNTINGS
self-leveling, support 10,000 lb

Heavy machinery can be installed and leveled in a matter of minutes, without bolting or shims, with 10,000-lb capacity LM7 Barrymounts. Mounts, which are larger sizes of units described (*NED—Dec. '53*), permit height adjustments up to ½-in. They lift machine foot to required height for leveling by simple turn of attaching bolt. They are engineered to isolate vibration and noise, and eliminate "walking" machinery. Made by **Barry Corp.,** 852 Pleasant St., Watertown 72, Mass.

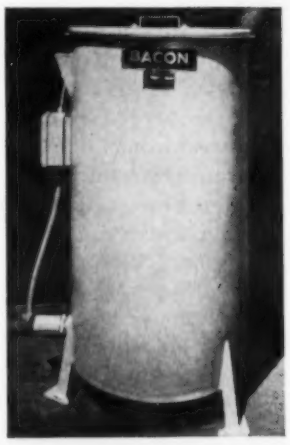
▲ For more details circle NED-533 K4 on enclosed inquiry slip ▲

COPPER LOUVERS
prevent fungus and damp rot

Corrosionproof circular copper louvers prevent moisture and fungus damage to metal, wood and concrete structures by assuring adequate ventilation. Recommended for paint protection, they are also suitable for ventilating instrument and other casings and for isolating radio frequency interference. Available in weather and termite-resistant design, louvers are made in 1, 1½, 2, 2½, 3, 4 and 6-in. sizes. Made by **Midget Louver Co.,** 15 Wall St., Norwalk, Conn.

▲ For more details circle NED-534 K4 on enclosed inquiry slip ▲

DEGREASING TANK
for tools, engine and machine parts

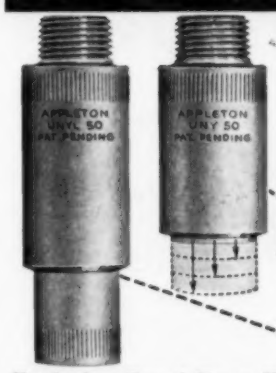


Electrically operated model DG-1 vapor type degreasing tank reaches full vapor level within 15 minutes. Level is controlled by thermostat and relay circuit and is maintained to within 4 in. of top. Measuring 40 in. high and 22 in. diameter, tank can be used for degreasing of tools, engine or machine parts and other metal items. Easily cleaned interior is coated with a durable corrosive resistant material. Unit can be converted for use as a hot tank. Made by **Bacon Vulcanizer Mfg. Co.,** Dept. 500, 1295 67th St., Oakland 8, Calif.

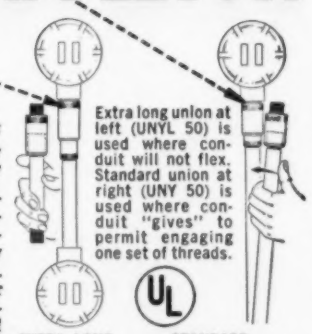
▲ For more details circle NED-535 K4 on enclosed inquiry slip ▲

NEW! Self-Adjusting, Explosion-Proof

EXPANSION UNIONS by APPLETON



Explosion-Proof Regardless of Position . . . Only One Unit . . . Two Moving Parts!
Expansion adjustment is built-in! The *two* moving parts telescope or expand to accommodate usual thread lengths. Only *two* tightening operations . . . each made separately! Smaller external diameters for convenient use in restricted quarters! Precision construction . . . the union remains completely explosion-proof at all times, regardless of its retracted or extended position! Special design guarantees positive ground at all times! Write for details!



EXTRA LONG UNYL Union showing up to 1-11/32" expansion . . . serves the purpose of two conventional type unions!

STANDARD UNY Union showing up to 21/32" expansion . . . for installation wherever conventional types were previously used!

Sold Exclusively Through Selected Wholesalers

APPLETON ELECTRIC COMPANY
1758 WELLINGTON AVENUE · CHICAGO 13, ILLINOIS

Rely on APPLETON *. . . The Standard for Better Wiring*

▲ For more details circle NED-536 K4 on enclosed inquiry slip ▲

Cogsdill Twist Dr

7

with HO "J" Typ

Engineers also Report Better Product Finishes, Elimination of Manual Pump and Sump Cleaning

● 73% longer wheel life, fewer rejects and indefinite safe-use life of coolant—that's the record of the Houdaille J-149 Coolant Clarifier at Cogsdill Twist Drill Co. of Detroit.

At Cogsdill the "J" Type Clarifier provides centralized, multi-tube filtration of grinding coolant for six flute grinders. Dirty coolant is piped directly into the clarifier where chips, abrasives and other solids are completely removed. A two-stage centrifugal pump carries clean coolant back to the grinders at 125 PSI.

Grinding wheels, formerly dressed after a run of 75 pieces, now average 120 pieces. Clean coolant also prevents overheating and subsequent burning of drills.

Elimination of individual grinder pumps and sumps, which had to be serviced every two weeks, has greatly reduced labor and maintenance expense.

Thanks to the Houdaille "J" Type Clarifier, Cogsdill now gets more output from its grinders at less cost and at higher operating efficiency.

▲ For more details circle NED-537 K4 on en

ARE HIGH COSTS SHRINKI

IF competitors are getting business that should have been yours . . . or if your profit margin are getting slimmer . . . it's time to be realisti about costs.

Notice how the lift truck, Work-O-Matic drop-bottom skid box and positioning stand team up to save this workman's time and speed his output. Picture the possibilities in your own plant.

▲ For more details circle NED-538 K4 on en

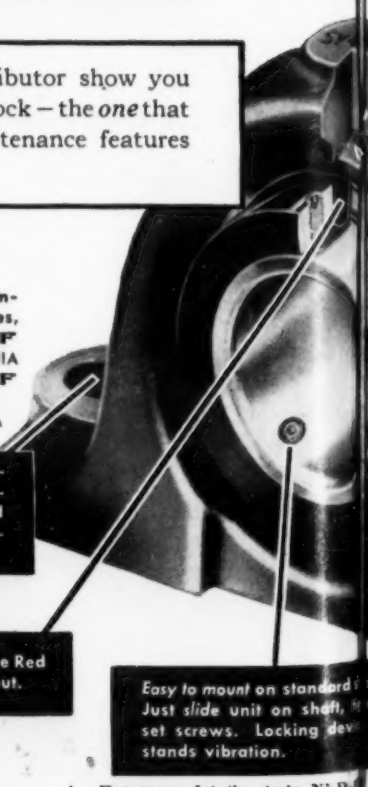
most PRACTICAL unit pillo

Let your SKF Distributor show you the "SY" Unit Pillow Block – the *one* that offers *all* the easy-maintenance features you've wished for.

Action!

Write for Bulletin 370-A with complete description, dimensional tables, available sizes, weights, etc. SKF INDUSTRIES, INC., PHILADELPHIA 32, PA. – *manufacturers of* SKF *and* HESS-BRIGHT® *bearings.*

7550-A



The "SY" Unit Pillow Block is interchangeable with existing installations by bolt hole spacing and center height features. Self-aligning bearing.

Rotating flinger, teams with the Red Seal to effectively keep dirt out.

Easy to mount on standard shaft. Just slide unit on shaft, tighten 2 set screws. Locking device withstands vibration.

▲ For more details circle NED-539 K4 on en

Twist Drill Company gets

73% LONGER GRINDING WHEEL LIFE

with HOUDAILLE "J" Type Coolant Clarifier

NEW MULTI-TUBE DESIGN FEATURES

- 1,000 square-inch filtering area keeps water based or mineral oil coolants clean, safe to use indefinitely.
- Self-cleaning filter tubes require no manual cleaning or maintenance.
- Simplified, low cost operation—no precoating filter aids or expendable filter media.
- Several models available for use on individual machine tools or small central systems.

Write for bulletin and case history

Honan-Crane Corporation
405 WABASH AVENUE • LEBANON, INDIANA
subsidiary of Houdaille-Hershey Corp.

NED-540 K4 on enclosed inquiry slip ▲

RINKING YOUR PROFITS?

There's one way we *know* you can make substantial reductions in your costs. And that's by speeding production and increasing the output of production workers.

You can do this by using Work-O-Matic* material handling equipment.

Experience in all types of industries and operations has proved that the Work-O-Matics shown here will *reduce handling costs from 30 to 40%!*

Call our engineers in and let us prove that we can do the same in your operations. Fast work-level positioning with a constant flow of material—more work per man per shift—will more than offset higher wages. Your profit margin will improve and *you can capture more of your market.* Write for Catalog 83 describing Work-O-Matics.

*Patent No. 2,445,038. Other patents pending.

UNION METAL
Material Handling Equipment

NED-5[illegible] K4 on enclosed inquiry slip ▲

it pillow block you can buy

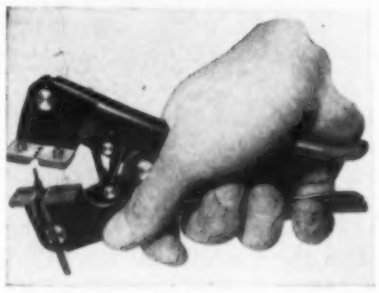
NED-[illegible] K4 on enclosed inquiry slip ▲

BALANCING MACHINES
have automatic unbalance indication

Horizontal static-dynamic balancing machines instantly give automatic indication of unbalance for selected plane of correction using sensitive Electodyne electronic indicating system. Angle and amount of unbalance are clearly shown on two large meters mounted on control panel. Plane of correction is changed quickly with pivot shifter which assures positive plane separation. Calibration of the indicating system is readily checked or changed using only a screwdriver. Full scale on the Amount meter can be set to indicate any desired amount of unbalance. Made by **Tinius Olsen Testing Machine Co.**, Balancing Dept., 4080 Easton Rd., Willow Grove, Pa.

▲ For more details circle **NED-540 K4** on enclosed inquiry slip ▲

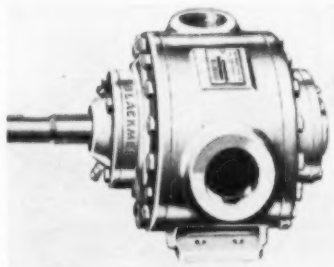
HAND WIRE STRIPPER
three sizes strip No. 10 to 22 wire



Carefully matched, precision-milled interchangeable cutters are featured by this hand wire stripper intended for general work as well as production jobs. Hardened steel strippers are offered in three sizes for stripping No. 10 through No. 22 wire. Lock-open feature holds jaws open automatically so that wire can be removed after stripping without crushing. Finger-tip touch on lower handle releases jaws, making it unnecessary to shift grip on tool while resetting. Made by **Crown Industrial Products Co.**, 1004 Amsterdam St., Woodstock, Ill.

▲ For more details circle **NED-541 K4** on enclosed inquiry slip ▲

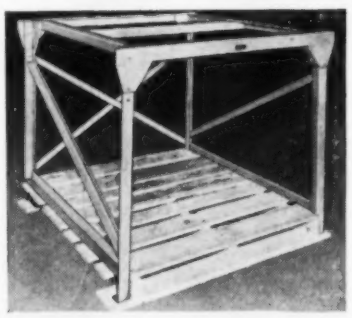
LIQUEFIED GAS PUMP
for use as truck or bulk plant unit



Designed for handling liquefied gases such as propane, butane and anhydrous ammonia, TLG rotary pump can be used either as truck or bulk plant unit. Antifriction bearings at both ends of shaft are completely isolated from the pumpage. Replaceable cartridge-type mechanical seals located on both sides of rotor control shaft leakage. Nonmetallic sliding vanes are self-adjusting for wear. Special composition vanes can be furnished for such fluids as anhydrous ammonia. Both vanes and liner are easily replaceable. Made by **Blackmer Pump Co.**, 1809 Century Ave., Grand Rapids 9, Mich.

▲ For more details circle **NED-542 K4** on enclosed inquiry slip ▲

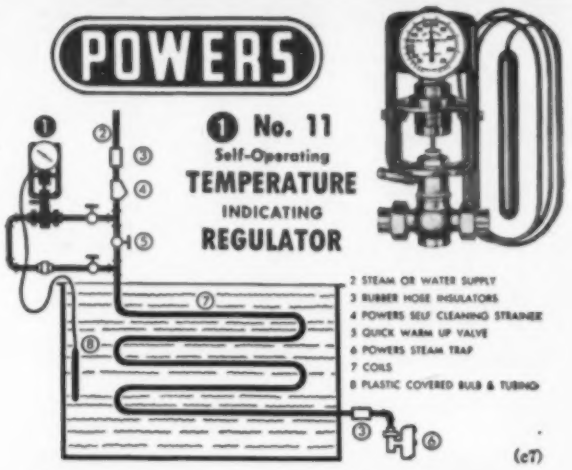
PORTABLE PALLET FRAMES
support 7000-lb stacked load



These steel pallet frames allow pallet loads to be stacked to ceiling without crushing packages on lower pallets and permit removal of lower pallets without disturbing heavy items stored above. Frame measures 48 in. square by 41 4/5 in. high and will support up to 7000 lb stacked above it. Load clearance between pallet and frame is 36 in. Each loaded pallet rests on frame below, permitting irregular shaped loads to be stacked. Made by **Frick-Gallagher Mfg. Co.**, Wellston, O.

▲ For more details circle **NED-543 K4** on enclosed inquiry slip ▲

POWERS



For Electroplating and Other Processes

If you want to hold a liquid in a steam heated or water cooled tank or vat at a uniform temperature use a Powers No. 11 Regulator. It is simple, dependable, easy to install and has a 4" dial thermometer. It indicates temperature of liquid being controlled and makes it easy to adjust regulator for various temperatures. For electroplating, thermal bulb and tubing are plastic coated and highly resistant to corrosion. Standard regulators have copper bulb and capillary tubing.

Write for Bulletins 329 and 330
THE POWERS REGULATOR CO.
Skokie, Ill. • Offices in 60 Cities • See Your Phone Book

Over 60 Years of Automatic Temperature and Humidity Control

▲ For more details circle **NED-544 K4** on enclosed inquiry slip ▲

CUT THE HANDLING IN MATERIALS HANDLING WITH

Wayne LIFTS

BOOST PRODUCTIVE MAN HOURS ... SAVE TIME, LABOR, DOLLARS

Simplify materials handling! Eliminate unnecessary "run-around hauls," loading and reloading . . . Install Wayne's System of LIFTronics.

WAYNE CROSS-OVER BRIDGES reduce costly and wasteful hauling, speed traffic and do away with the need for ramps between buildings. Available to suit every need and location—single and double bascule, turntable and straight lift platforms.

WAYNE PLATFORM LIFTS speed loading where no dock is available, simplify inventory stocking, expedite all elevator type operations. Can be adapted to unusual handling problems—lifting large rolls of paper in printing plant, feeder on machines, etc. Available in single and double post types made to fit your exact specifications.

WAYNE LOADING DOCK RAMPS have proved they can cut loading time by as much as 75%. Loading or unloading, just back up the truck, push the button and the Wayne Loading Dock Ramp is adjusted to correct height. Factory trucks can roll on or off easily.

Answer your materials handling problems with Wayne LIFTronics. Write for the new book on materials handling giving engineering data, installation photos, etc.

Wayne NATION WIDE SERVICE

THE WAYNE PUMP COMPANY
SALISBURY, MARYLAND — TORONTO, CANADA

▲ For more details circle **NED-545 K4** on enclosed inquiry slip ▲

★ in wires—cables—bus bars—fuses

measure current quickly

Both AC and DC

COLUMBIA

TONG TEST

- Only Tong Test can measure both AC and DC by snapping tongs around electrical conductor. Readings are taken instantly and accurately without breaking circuit or insulation.
- Interchangeable scale ranges up to 1000 amperes AC or DC.

AMMETER

- Safe, convenient, light weight. Cannot burn out as there are no windings.
- Voltage readings up to 600 volts AC or DC with the Voltor attachment.
- Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½".

Write for Tong Test Bulletin ND-400
COLUMBIA ELECTRIC MFG. CO. 4525 HAMILTON AVE. CLEVELAND 14, OHIO

▲ For more details circle **NED-546 K4** on enclosed inquiry slip ▲

Precise

LOWEST COST PRECISION

FOR TOOL ROOM AND PRODUCTION

UP TO 45,000 R.P.M. AND ¼ H.P. ON AC/DC. Only PRECISE has the speed, power and precision needed to turn *Tungsten Carbide Mills* as well as all other rotary tools with shank diameters to ¼". Grind, mill, finish, polish any material from wood to the hardest alloy steel. MODELS SUPER 30 and SUPER 40 are for hand applications or machine set-ups; PRECISE SUPER 50 is for heavy duty in machine set-ups. Precision quills and chucks; lifetime-lubricated, micro-precision bearings; machined metal housings. Mounts and accessories for each model extend versatility on standard machine tools.

New

PRECISE SUPER 30 45,000 R.P.M. and ⅕ H.P. in 35 oz. Draw collet.

Write FOR CATALOG

PRECISE PRODUCTS CORP. 1346 Clark St., Racine, Wis.

▲ For more details circle NED-548 K4 on enclosed inquiry slip ▲

YOU'LL GET years and years of 100% ACCURATE performance...

THOUSANDS OF REDINGTON COUNTERS, many put into service 20, 30, and 40 years ago, are still in continuous use...*and still functioning perfectly!*

REDINGTONS are widely used on • PUNCH PRESSES • SHEETERS • DRILL PRESSES • CONVEYOR LINES • PACKAGING MACHINES BENCH OPERATIONS and wherever a positive stroke Counter can be used. Sturdy, reliable REDINGTONS have been standard equipment for years on such well-known printing presses as *C&P, Kluge, Kelly, Banthin, Miehle, etc.*

EQUIP ALL YOUR MACHINES NOW WITH *THE UNIT YOU CAN COUNT ON!*

Send today for this free illustrated catalog NED, showing all models, applications, prices and quantity discounts.

CHECK THESE LONG-LIFE, HIGH-EFFICIENCY FEATURES: 1) Easy-to-read white on black numerals integral with double-injected plastic wheels—can't wear off! 2) Handsome wear-resistant black crackle finish, 3) Handy reset knob, 4) All-purpose mounting bracket, 5) ALL WORKING PARTS OF STEEL. *Every REDINGTON is fully guaranteed!*

F.B. REDINGTON CO. 101 S. SANGAMON ST., CHICAGO 7, ILL.

▲ For more details circle NED-549 K4 on enclosed inquiry slip ▲

NEW!

REEVES Automatic Controls! ...including Auto-Pneumatic with linear output speeds!

• *For automatically controlling liquid levels in tanks, maintaining constant temperatures, pressure, and other variables, and monitoring flow systems of liquids, gases or chemicals.*

REEVES new Auto-Pneumatic control with linear output speeds is but one of a complete line of controls designed and engineered to operate your machines more efficiently, more profitably, *automatically.* Send today for your copy of REEVES new Automatic Production Control Booklet. Specify ND2c-G.

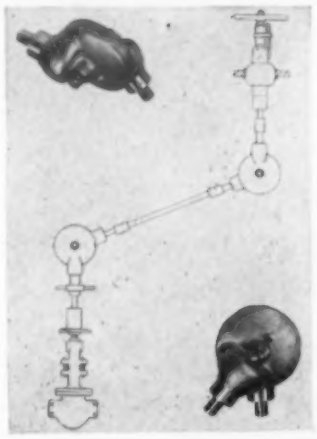
FREE!

Reeves New Automatic Production Control Booklet

REEVES PULLEY COMPANY • COLUMBUS, IND.

▲ For more details circle NED-550 K4 on enclosed inquiry slip ▲

GEARED JOINT transmits torque around bends



Utilizing a bevel gearing system to transmit torque around bends, this geared joint will operate at any angle up to 360 degrees. Illustration shows one application, where joint is used for sharp bends for flexible shaft or reach rod remote controls for valves. Three sizes are available. They have maximum recommended operating torques of 500, 2000 and 3500 lb-in., and accommodate shafts ranging from ½ to 1⅝-in. diameter. Made by **Stow Mfg. Co.** 26 Shear St., Binghamton, N. Y.

▲ For more details circle NED-551 K4 on enclosed inquiry slip ▲

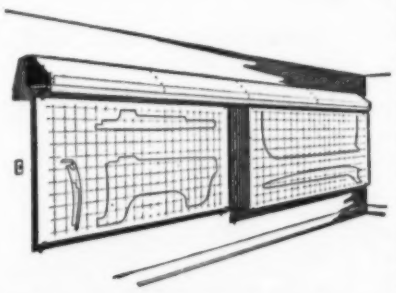
SEALED CASTERS & WHEELS protect against moisture, acid, grit

Available on caster models with load capacities ranging from 175 to 1500 lb, sealed raceways and wheel bearings provide protection against moisture, grit and other destructive conditions, in addition to keeping grease in bearings. Formed Neoprene seals in raceways stand up under heavy loads and constant swiveling. Felt wheel bearing seals are available on nicro-steel, forged steel, mold-on rubber and MB industrial demountable wheels. Made by **Rapids-Standard Co.,** Dept. SC, 342 Rapistan Bldg., Grand Rapids 2, Mich.

▲ For more details circle NED-552 K4 on enclosed inquiry slip ▲

LARGE-LAYOUT FILE can be wall or caster mounted

Designed to facilitate filing of large layouts so as to make them readily accessible, Roll-A-Way filing system consists of a rack with a number of parallel tracks from which layouts are suspended. Rack is twice the width of layout or drawings, so that the one required can be quickly rolled out from its filing place into full view. Racks can be built with any number of tracks to accommodate both thin metal and thick Celotex or Masonite layouts. They are of any required length and can be caster-stand or wall mounted. Wall models have fluorescent lighting. Made by **Inter-Lakes Engineering Co.,** 4847 Bellevue Ave., Detroit 7, Mich.



▲ For more details circle NED-553 K4 on enclosed inquiry slip ▲

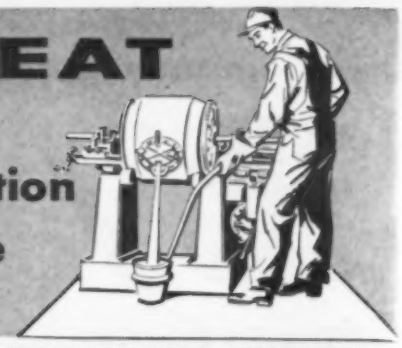
ELECTRIC CENTRIFUGES over 30 different heads available

Formica topped cabinet which can be used as a work surface is feature of No. 10 electric centrifuge. Unit incorporates flush type safety catch, ball bearing rubber-covered casters, accessory storage space, built-in 6000-rpm speed indicator, 3-hour electric timer, electric brake and 1/3-hp series wound motor. Cover has a safety switch. Powerstat stepless speed control is also built into the Electrifuge. Over 30 different types of heads are available. Made by **Chicago Surgical & Electrical Co.,** Dept. 10, 217 N. Desplaines St., Chicago 6, Ill.

▲ For more details circle NED-554 K4 on enclosed inquiry slip ▲

GREAT small production furnace

30 KW 60-LB.



DETROIT ROCKING ELECTRIC FURNACE

Here is the furnace designed especially for fast, controlled metal melting on a limited scale. Indirect arc melting, automatic rocking control with 3-phase reversible motor, independently mounted electrode brackets for easy shell interchange, low power consumption. Rocking action assures complete homogeneity of metal, greater heat utilization, longer lining life. For ferrous and nonferrous alloys. Excellent for research and educational use. Sold complete with transformer.

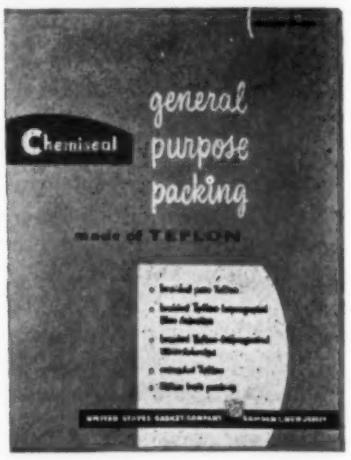
Write today for full information on Type GMS Detroit Rocking Electric Furnace.

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: In BRAZIL—Equipamentos Industrias "Eisa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castellvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Casco, S. de R. L. Atenas 32, Despacho 14, Mexico City, D. F.

▲ For more details circle NED-555 K4 on enclosed inquiry slip ▲

8 PAGE ANSWER • • • to your Chemical Resistant Packing Problems



• Write for your copy of this new TEFLON General Purpose Packing Catalog. Featured are:

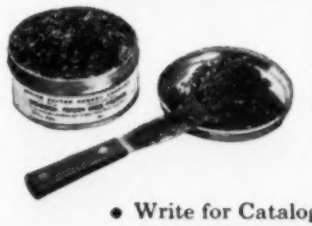
BRAIDED PURE TEFLON PACKING

The only positively corrosion-resistant compression type packing available to industry, today. Excellent for use with lower shaft speeds. Offered in coil or ring form with open cut square joint, in square cross-section from ¼ in. up. Also available, TEFLON impregnated white or blue asbestos square braided packing.

EXTRUDED TEFLON PACKING

Available in 2 types—620EG, impregnated with graphite, and 620EM, with mica. Ideal for field maintenance or emergency packing, when preformed packing rings are not available. Offered in rectangular cross-section from ¼ in. up.

TEFLON BULK PACKING



Chemiseal Bulk Packing is chemically inert and stable over a very broad temperature range. It can be readily stocked for use in emergencies when preformed rings are not available. Offered in ½, 1 or 5 lb. cans.

• Write for Catalog TP-454 or see your convenient Industrial Distributor.

UNITED STATES GASKET COMPANY

CAMDEN 1 • NEW JERSEY
FABRICATORS OF duPont TEFLON, KelloggKEL-F AND OTHER PLASTICS
Representatives in Principal Cities Throughout the World

▲ For more details circle NED-556 K4 on enclosed inquiry slip ▲

NEW, IMPROVED TYPE
screw anchor expanders

quickly set anchors in masonry of any thickness, holes of varying depth

Now, with the new GREENLEE Screw Anchor Expander you can rapidly and *securely* set lead screw anchors *flush* with the surface of masonry . . . *regardless of its thickness . . . regardless of hole depth.* Eliminates all guesswork . . . the expander tool positions the anchor *positively* every time. Fast, easy operation. Simply drill hole, screw the anchor onto expander, insert in hole, then strike expander with hammer. Three sizes for most widely used sizes of anchors. Write for descriptive literature. Greenlee Tool Co., 1950 Herbert Ave., Rockford, Illinois.

GREENLEE

▲ For more details circle **NED-557 K4** on enclosed inquiry slip ▲

Super Sweeper Snaps Up Nails, Tacks and Scrap
From Factory Floors, Lots, etc.

New lightweight **PERMANENT MAGNET** *receives enthusiastic reception for maintenance help.*

Increasing problem to maintenance executives caused by dangerous tramp iron is solved by the Eriez Super Sweeper. Harmful, and often expensive, staples, nails and pieces of scrap iron are quickly snapped up by Super Sweeper's powerful ALNICO action.

Super Sweeper is light and easy to handle . . . sweeps large areas with maximum efficiency. Use it indoors or outdoors. It is a self-contained unit. No electric current. Your first cost is your last cost!

Thanks to Super Sweeper's design it can be PULLED by a jeep, truck, etc. . . . or PUSHED by a man . . . or SUSPENDED from a lift truck. The tubular steel handle can be removed. Wheels, fitted with puncture-proof 8.00" x 2" tires, are also removable.

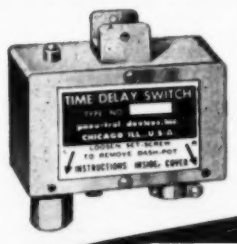
Three strengths and four magnet widths (24", 36", 48" and 60") make certain that there is a Super Sweeper to fit your exact requirement. Write for Bulletin on this versatile trouble-saver.

ERIEZ
MANUFACTURING COMPANY
80K Magnet Drive, Erie, Pa.

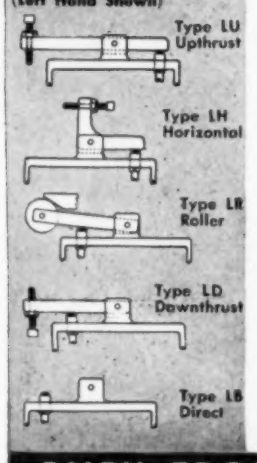
ERIEZ

▲ For more details circle **NED-558 K4** on enclosed inquiry slip ▲

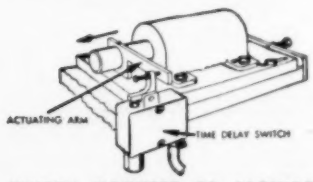
NEW CYLINDER TIME DELAY CONTROL SWITCH
INCREASES APPLICATION . . . WIDENS USE OF CYLINDER POWER



For Any Type Actuation Left or Right Hand (Left Hand Shown)



Pneu-Trol Time Delay Switches provide independent hydraulically controlled adjustable time dwell between ¼ and 60 seconds in 20 to 1 ratios. Readily mounted on machine for cylinder dwell at a positive stop. Compactly designed—a simplified low cost answer to electrical time dwell control of any air or hydraulically operated machine movement such as press work, burnishing, coating, quenching, metal-cutting, etc. Ideal for automatic feeders. Dimensions: 4⅛" wide; 2⅝" high; 1-7/16" deep. Overall height 4⅛".



SWITCH MOUNTED TO PROVIDE DWELL AT END OF POWER STROKE

Write for descriptive literature and complete details.

PNEU-TROL DEVICES, INC.
1432 N. Keating Ave. Chicago 51, Illinois

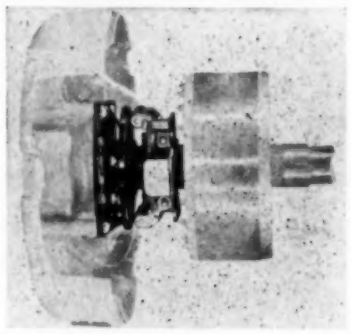
▲ For more details circle **NED-559 K4** on enclosed inquiry slip ▲

LAPPING-POLISHING MACHINE
bowl diameters from 5 to 24 in.

An easy, mechanical method for lapping and polishing metallurgical samples, metallic sealing ring faces and other metal parts to a scratch-free finish is provided by this electromechanically operated, vibratory-type lapping and polishing machine. Many samples can be handled in one operation. Vibrating bowl can be lined with whatever polishing cloth is desired. Finger-tip control of vibration regulates polishing speed. Models with bowl diameters from 5 to 24 in. are offered. Rubber feet permit use on any rigid, flat surface. Made by **Syntron Co.**, 405 Lexington Ave., Homer City, Pa.

▲ For more details circle **NED-560 K4** on enclosed inquiry slip ▲

REVERSING SWITCH
for fractional-hp electric motors



Reversing switch integrated with a starting switch makes the reversability of fractional horsepower single-phase electric motors automatic. Motor rotation direction is reversed each time the motor is turned on. Reversal also occurs whenever an unusual overload condition occurs. Switch disconnects starting winding of the motor when rated speed in revolutions per minute is reached. Large silver contacts with efficient wiping action prevent pitting and corrosion. Made by **In-Sink-Erator Mfg. Co.**, 1223 Fourteenth St., Racine, Wis.

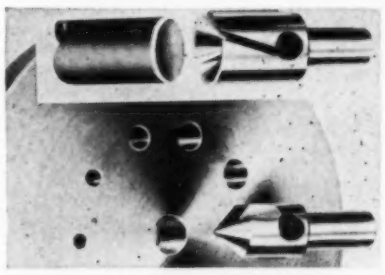
▲ For more details circle **NED-561 K4** on enclosed inquiry slip ▲

MOBILE POWER SHOVEL
compact unit has 1200-lb capacity

Mobile and compact, Bulk Master power shovel is designed for handling loosely packed bulk materials in close quarters. It has a 1200-lb capacity and will turn in a 73-in. radius. Overall height is 60 in. and weight 4400 lb. Full-shovel lifting speed of 6 seconds, dumping speed of 1 second and lowering speed of 3 seconds with a dumping angle of 60 degrees are features. Bucket can be carried without spillage in completely lowered position. Gasoline-engine powered unit has two speeds forward and reverse and will climb a 14 per cent grade fully loaded. It has hydraulic brakes and front drive tires. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

▲ For more details circle **NED-562 K4** on enclosed inquiry slip ▲

DEBURRING TOOLS
chamfer inside and outside diameters



Efficient deburring and chamfering of both inside and outside diameters can be done by Noburs-sink and Noburod companion tools. Former is for openly accessible hole faces, while latter tool is intended for outer ends of rods, tubes and bosses. Low torque design allows rapid off-hand workpiece handling without chatter or development of secondary burr. Both tools employ two-piece construction which permits cone faces to be cylindrically ground on a tool and cutter grinder or any lathe with tool post grinder. Made of high speed steel, they work equally well on all metals. Range of application extends from less than 1/16-in. hole size up to body diameter. Made by **Nobur Mfg. Co.**, Dept. N, 717 N. Victory Blvd., Burbank, Calif.

▲ For more details circle **NED-563 K4** on enclosed inquiry slip ▲

FREE

HOW MOTOCYLINDERS SPEED AND SIMPLIFY MATERIAL HANDLING

Turn to this book for a better way to push, flip, raise, lower and release material. Fully explained are the revolutionary thrust techniques of Westinghouse Motocylinders. See how these compact drive units give you greater precision and economy together with far less maintenance than your present material-handling method. The simplicity of Motocylinder installation and operation is clearly shown . . . no steam or hydraulic systems involved.

Included are thrust diagrams, torque curves, control arrangements, rating charts and important construction features of the Westinghouse Motocylinder.

Write today for your copy of B-6090 and learn how motions can be put to more practical use with Motocylinders. Address your request to: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-07339

YOU CAN BE SURE...IF IT'S Westinghouse

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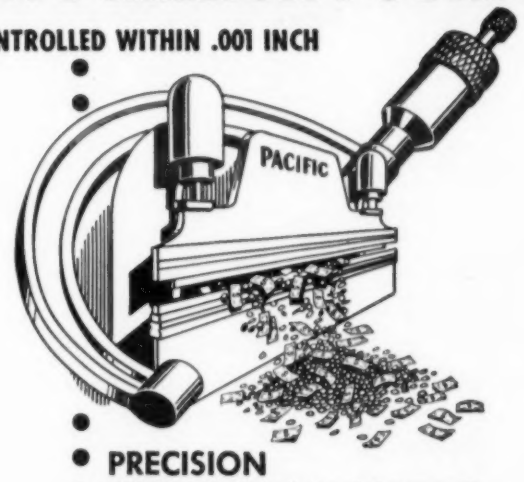
TWO MILLION POUNDS
CONTROLLED WITHIN .001 INCH



- **PRECISION**
  1000 Ton Pacific Hydraulic Press Brakes repeatedly form bends within .001". The ram remains level within minutes of arc.
- **PRODUCTION**
  Pacific Hydraulic Press Brakes in operation today multiple punch heavy steel fence posts at the rate of 1000 per hour.
- **PROFITS**
  Precision + Production = Profits. Investigate today.

PACIFIC INDUSTRIAL MFG. CO.
848 - 49th Avenue - Oakland, Calif.

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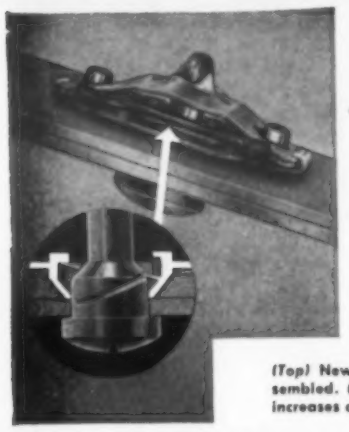
"Kodak Photorecording Papers and Films . . . how to pick the one you need"

That's the title of a folder we recently published.

It gives you the details about the broad range of photographic films and papers we produce for photorecording purposes, tells you which to use for the application you have in mind, lists the various spoolings and lengths available. If you use photorecording now, or plan to use it in the future, you should have a copy. Just write to:

Industrial Photographic Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

▲ For more details circle **NED-566 K4** on enclosed inquiry slip ▲



NOW! Shear strength *twice* that of any other fastener!

NEW Lion "Hi-Strength" design fills every need for parts that must be fastened, taken apart, buttoned tight quickly

(Top) New Lion "Hi-Strength" fastener assembled. (Inset) Beveled counter sink which increases area over which stress is distributed

Here's a new and better answer to your problem of metal-to-metal fastening where high shear stress and vibration are factors.

It's the Lion "Hi-Strength" fastener, combining speedy quarter-turn opening and closing with a shear strength of 4750 lbs!

This "Hi-Strength" fastener is remarkably strong because shear load is evenly distributed over the area of the fastened parts. The secret lies in the *beveled* counter sink in the sheet and the nut.

In addition to high shear strength, its tensile strength is 3000 lbs. Sheet separation is zero up to 4750 lbs. Misalignment is as much as .125 with high shear qualities. Regardless of the number of times it's opened or closed, there is no wear. It cannot be overtorqued (up to 3750 lbs.). It cannot be fastened incorrectly. It is no larger than a standard No. 5!

To test it yourself, write for a free mounted working sample. Just drop us a line on your company letterhead.

LION FASTENER, INC. 600 Main St., Honeoye Falls, N.Y.
In Canada: A. T. R. Armstrong Co., 50 St. Clair Avenue West, Toronto

▲ For more details circle NED-567 K4 on enclosed inquiry slip ▲

To quickly dissolve rust, loosen bolts, nuts and couplings.

Write today for free sample of Tasgon, the ***penetrating*** rust solvent.

SAMUEL CABOT INC.

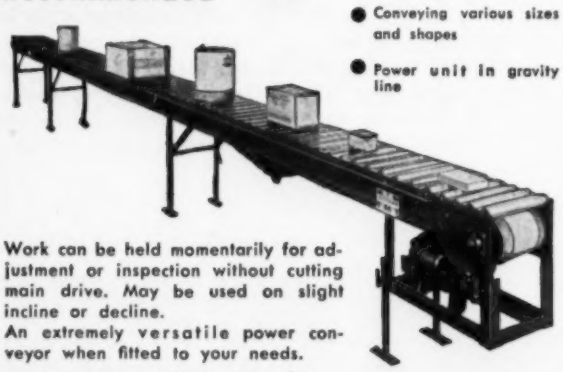
1032 Oliver Bldg., Boston 9, Mass.

▲ For more details circle NED-568 K4 on enclosed inquiry slip ▲

METZGAR LIVE-ROLLER CONVEYOR

Specifically Recommended **for**

- Moving sharp-cornered and rough-edged items
- Conveying various sizes and shapes
- Power unit in gravity line



Work can be held momentarily for adjustment or inspection without cutting main drive. May be used on slight incline or decline.

An extremely versatile power conveyor when fitted to your needs.

Standard widths: 11½" — 15" — 18" — 24". Length to suit. Conveyors up to 30' are powered by a 110 V. single phase gearhead A.C. or D.C. motor; longer units, 220/440 three phase A.C. or D.C. Roller spacing as required. Factory lubricated for life.

- Production-line work movement
- Handling heated and heat-treated items

Our engineers can help you most when you explain your requirements fully. Ask for Bulletin J-1.

METZGAR CONVEYOR CO.

416 Douglas, N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

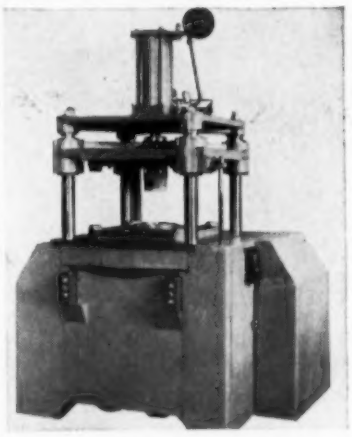
▲ For more details circle NED-569 K4 on enclosed inquiry slip ▲

VACUUM CLEANER HOSE
of light weight plastic construction

A 25-ft length of this industrial vacuum cleaner hose weighs only 7½ lb. Of vinyl-covered nylon construction for durability, it is available in yellow, orange, black or other colors to assure visibility and safety from tripping. Hose can be equipped with end-fittings for various makes of cleaners, or with a soft end which fits many machines. It measures 1½-in. ID. Hose, which will not mar or scratch room finishes or furniture, is flexible, resists kinking and possesses usual vinyl resistance to deterioration and rot. Made by **Flexaust Co.**, Dept. NA, 100 Park Ave., New York 17, N. Y.

▲ For more details circle NED-570 K4 on enclosed inquiry slip ▲

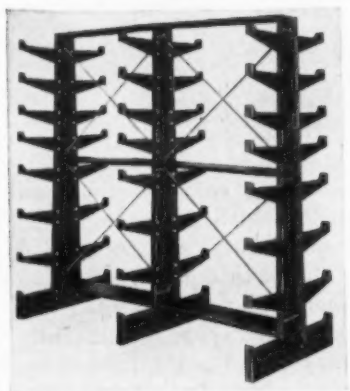
TRIMMING PRESS
for material up to 0.125-in. thick



Developed for use with the Shimmy trimming die, compact press takes up less than 22 sq ft of floor space and is 8 ft high. By changing cutting adapters, it can be set up to trim shells of any size and shape up to 16 in. square and 6 in. deep. Material thickness is variable up to 0.125-in. depending on size of the drawn shell. Mechanically operated press is controlled by two push-button switches which require two-handed pressure for operator safety. Ram stroke is approximately 15 in. and a complete trimming cycle requires about 4 seconds. Made by **Steel Products Engineering Co.**, Brehm Div., 1100 W. Columbia St., Springfield, O.

▲ For more details circle NED-571 K4 on enclosed inquiry slip ▲

BAR & PIPE RACK
arms adjustable on 1½-in. centers



Redesigned racks for storage of bars, rods, pipes and long heavy parts now have heavy steel Tee upright members and simplified carrying arms. Horizontal arms allow loading or removal of long pieces without the wide aisle space previously required. Arms are now adjustable on 1½-in. centers to accommodate varying quantities. Double and single face racks are available. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

▲ For more details circle NED-572 K4 on enclosed inquiry slip ▲

WIRE & PIPE CALIPER
pocket-size unit is stainless steel

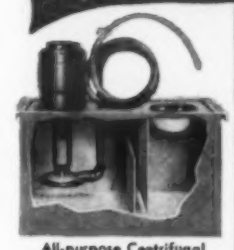
Direct measurement of electrical conductor and pipe sizes can be made with the Wire-Mike pocket-size stainless steel caliper. Instrument will size stranded commercial cable from No. 18 through 2000 Mcm; solid wire (AWG) from No. 20 through 4/0; ACSR from No. 6 through 336.4 Mcm; rigid conduit and copper pipe from ¼ through 2½ in.; and thinwall conduit from ⅜ through 2 in. Unit is also an inside and outside caliper in 32nds inches and a 3½-in. rule. It has a conversion table of pipe sizes to inside dimensions.

Priced at $1.95, caliper is 4½ in. long closed and has leather slip case. Made by **Burndy Engineering Co.**, Norwalk 12, Conn.

▲ For more details circle NED-573 K4 on enclosed inquiry slip ▲

See how GRAYMILLS Coolant Pumps can help you

• convert to wet cutting or • replace worn out pumps



All-purpose Centrifugal Pump Unit No. H-2-3308A for 90% of machine tool applications

Gear Pump Unit No. SG1-4-25A Ideal for single spindle drill presses and small lathes

in a matter of minutes for increased production—improved quality — and longer tool life with your present machine tools.

If you need a larger volume of coolant, cutting oils, water, solvents, etc., at low pressures, the new improved Graymills Centrifugal coolant pumps are your answer. If you need higher pressures, for heavier liquids, a Graymills Gear type pumping unit will deliver from 1 to 3 GPM with pressures up to 100 PSI. Both types will give longer trouble-free service, efficient operation at a minimum of cost. Standard models in 1/25, ⅛, ¼ and ½ H.P. Various tank sizes and fittings.

All standard models stocked by leading Industrial Supply Distributors for immediate delivery — or write for catalog.

GRAY-MILLS

GRAYMILLS CORPORATION
3717 NORTH LINCOLN AVENUE • CHICAGO 13, ILLINOIS
WEST COAST—4511 MELROSE AVE. • LOS ANGELES 29

▲ For more details circle NED-574 K4 on enclosed inquiry slip ▲

where **HEAT** eats metal
paint with **THERMALITE**
and protect up to **1000°**

NEW SILICONE HIGH-HEAT ALUMINUM PAINT FUSES TO METAL . . . PROTECTS AGAINST RUST AND CORROSION

A revolutionary paint development, Thermalite fuses to metal, will not discolor, blister, burn or flake off—even at 1000° heat! Protects against rust, corrosion, chemical fumes. Formulated to stand severe weather exposure as well as high heat.

Ordinary aluminum paints flake off under high heat because the resins burn out. Thermalite's film-forming solids consist of "silicones"—the wonder resin that defies heat, fuses to metal, producing a tough, silver-bright, tightly-adhering coating.

In hundreds of applications industrial users have proved that Thermalite solves their problem of obtaining a paint coating that withstands 400° to 1000° heat. Two types available, one for interior, the other for exterior metal surfaces.

FREE! . . . to industrial paint users. Your letterhead request brings complete information on Thermalite for interior or exterior use. Write today!

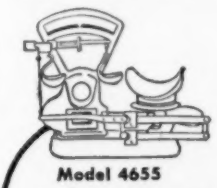
THE TROPICAL PAINT AND OIL CO. SINCE 1883
1124-1296 W. 70th Street, Cleveland 2, Ohio

▲ For more details circle NED-575 K4 on enclosed inquiry slip ▲

COUNT BY WEIGHT

Control Costs with New TOLEDOS

These new Counting Scales eliminate slow, tedious hand counting of parts . . . count hundreds of parts *accurately* in a few seconds! Complete line—for issuing predetermined quantities . . . counting unknown quantities . . . for faster inventory counts . . . or to get accurate receiving, shipping, and piece-work counts. Choice of double and triple ratio combinations. Send for booklet. Toledo Scale Company, Toledo 1, Ohio.



Model 4655

Portable Type

TOLEDO®
HEADQUARTERS FOR SCALES

▲ For more details circle NED-576 K4 on enclosed inquiry slip ▲

A "STOCK" REPORT *that's always profitable*

Regular Inventory— Not Surplus!

Once more, Lamson offers a service to help you in purchasing bolts and nuts.

This Stock List is a monthly compilation of availabilities of the different types and styles of Phillips and slotted machine and tapping screws.

You will find it profitable in terms of certain shipment, fast delivery, advantageous shipping costs and convenience, to request this "Stock" Report from Lamson & Sessions. With this method of complete stock listing we are, in fact, your warehouse inventory of fasteners at no cost to you.

This stock list, printed in an easy-to-file size, is yours AT NO COST. It will be sent each month simply by requesting it. Write today for your monthly "Stock" Report.

The LAMSON & SESSIONS Co.

1971 West 85th St. • Cleveland 2, Ohio

Plant at Cleveland and Kent, Ohio • Birmingham • Chicago

For more details circle NED-577 K4 on enclosed inquiry slip

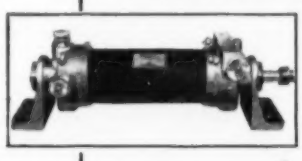
Get "packaged" automation with

Modernair CO-AXIAL AIR/HYDRAULIC CYLINDERS

Give you smoothness and precise control of hydraulic power from your shop air supply... no hydraulic pump, valves or piping needed.

Complete automation unit... automatic models available with built-in controls (remotely operable if desired) of speed, direction, adjustable fast traverse either direction, automatic recycling. Standard models can be remotely controlled with conventional valving and piping.

Compact, self-cooling co-axial design has air cylinder around oil cylinder, avoids long in-line design. Exhaust air cools oil. Uses standard MODERNAIR cylinder mountings.



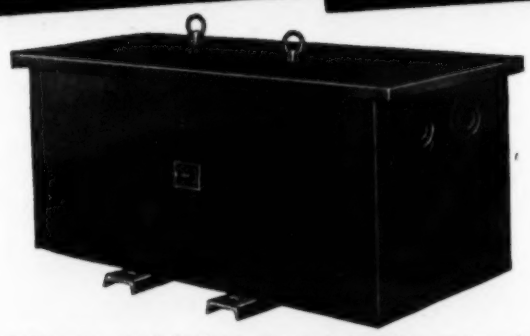
Available in stroke lengths to 72"; ideal for automatic tool or work piece feeds and other precise control operations. Stocked in principal U.S. and Canadian cities and at factory. For prompt delivery, call authorized dealer or write us for data and prices.

Modernair CORPORATION

ROOM 108, 400 PREDA STREET • SAN LEANDRO, CALIFORNIA

For more details circle NED-578 K4 on enclosed inquiry slip

3 PHASE TRANSFORMERS 3 KVA THRU 750 KVA



Next time you need 3 phase, dry type transformers in a hurry, check the performance data, practical mechanical features, as well as the price of Acme Electric dry type transformers. Stock sizes from 3 thru 750 KVA, all standard primary voltages up to and including 5 Kv. There's a Service Dealer with stock on hand — as close as your telephone.

ACME ELECTRIC CORPORATION

MAIN PLANT: 3010 WATER STREET • CUBA, N. Y.

West Coast Engineering Laboratories: 1375 W. Jefferson Blvd. • Los Angeles, Cal.
In Canada: ACME ELECTRIC CORP. LTD., 50 North Line Road • Toronto, Ont.

Acme ACME Electric TRANSFORMERS

For more details circle NED-579 K4 on enclosed inquiry slip

COMPACT VACUUM METALLIZER for moderate volume requirements

Console-type control panel provides convenient grouping of gages and controls of model 428 vacuum metallizer. Packaged unit is designed for economical moderate production requirements. Its chamber measures 36 in. diameter and 60 in. long. Integral pumping system brings chamber down to working pressure in about 10 minutes. Work-holding rack accommodates four standard rotating fixtures. Made by **F. J. Stokes Machine Co.,** 5900 Tabor Rd., Philadelphia 20, Pa.

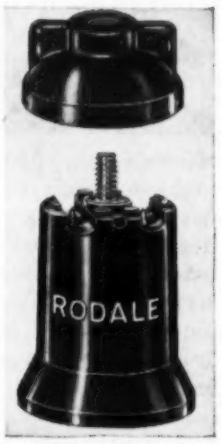
For more details circle NED-580 K4 on enclosed inquiry slip

DOOR OPERATOR activated automatically or manually

Safety features of the Economatic door operating mechanism include manual operation in event of power failure and completely pneumatic operator and controls for use in hazardous areas. Door is under complete control at all times to prevent slamming. Self-lubricating engine and choice of automatic or semiautomatic controls are other features. Outfit is furnished ready to operate and mounted on base plate for easy installation. It can be activated automatically by treadle or photoelectric controls, or semiautomatically by pushbutton, foot switch, press panel or pull-cord. Latter type controls can be electric or pneumatic. Made by **National Pneumatic Co.,** Dept. N, 125 Amory St., Boston 19, Mass.

For more details circle NED-581 K4 on enclosed inquiry slip

PIN-TYPE SOCKET weatherproof, for 16 or 18 wiring



Designed for both inside and outdoor use, Cat. No. 234 pin type socket has cap section fashioned into form of a wing-type finger wrench to permit it to be quickly and tightly applied. Pressure applied by wrench causes interior contact pins to penetrate the insulating wire and make positive contact. Socket will take either No. 16 or 18 stranded wire and has an intermediate base. It is rated at 75 w 250 v. A wire suspension hook is supplied with each socket for handling purposes. Made by **Rodale Mfg. Co.,** Minor St., Emmaus, Pa.

For more details circle NED-582 K4 on enclosed inquiry slip

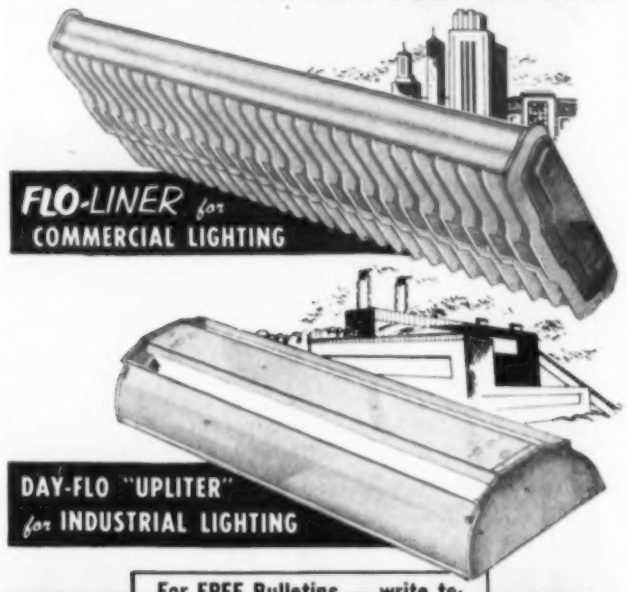
CYLINDRICAL STRAINER for heavy oils, viscous liquids

Cylindrical type strainer which employs a wire mesh basket is designed for heavy oils and other viscous liquids that will not affect steel or stainless steel. Strainer is available in nine sizes, ranging in capacity from 6 to 7050 gpm when handling oil of 100 SSU viscosity. Flow of liquid may be in either direction, but for greatest efficiency, recommended flow direction is from outside in on smallest strainer and from inside out on larger models. Made by **Wm. W. Nugent & Co.,** 410-412 N. Hermitage Ave., Chicago, Ill.

For more details circle NED-583 K4 on enclosed inquiry slip

Whatever your Lighting Requirements...

THERE'S A *Wheeler* FIXTURE THAT'S RIGHT FOR YOU *and the* JOB!



For FREE Bulletins — write to:

Wheeler REFLECTOR COMPANY

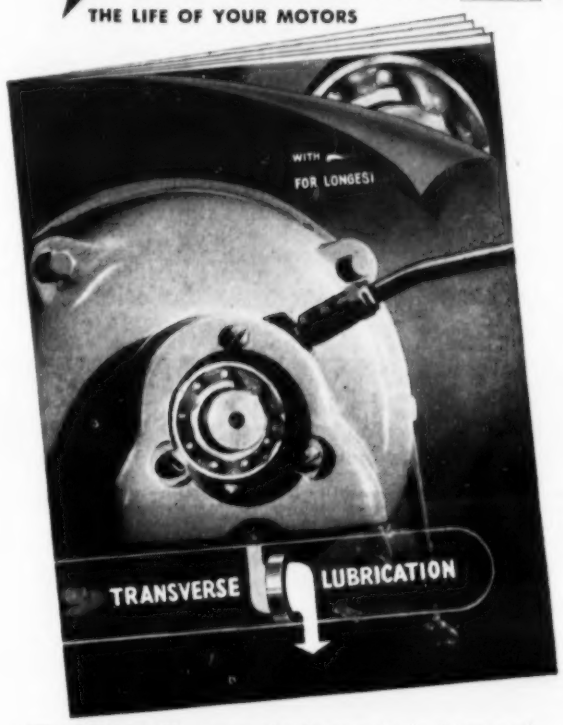
275 CONGRESS STREET — BOSTON 10, MASS.
Distributed Exclusively Through Electrical Wholesalers

For more details circle NED-584 K4 on enclosed inquiry slip

Startling Facts ABOUT MOTOR BEARING LUBRICATION

FREE!

THIS FULL COLOR PROFUSELY ILLUSTRATED BOOKLET OF FACTS THAT HAVE A *BEARING* ON THE LIFE OF YOUR MOTORS



The booklet illustrates the three principal types of bearings used in motors – cartridge, one-side lubrication and Lubriflush – with explanations of the functions of each. For demonstrating the action of re-lubrication in the U. S. Lubriflush bearings, a transparent bearing housing is dramatically illustrated by a series of natural color photos. This informative educational booklet, edited by lubrication engineers, is full of startling facts you should know. Write today for a complimentary copy. Simply fill in the Coupon below.

U.S. ELECTRICAL MOTORS, Inc.

Los Angeles 54, Calif. • Milford, Conn.

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☐ Lubriflush Booklet #1848

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Company_____
Address_____
City____ Zone____ State____

For more details circle NED-585 K4 on enclosed inquiry slip

A better Carbide Saw —made better by the Gay-Lee patented tip

Gay-Lee has built these saws as thin as .020" and still no tip trouble or run-out was encountered in high production use. These are real production tools for all slotting operations . . . are being used by leading manufacturers of business machines on extreme close tolerance work and by manufacturers of other products.

If you have slotting problems Gay-Lee can help you.

"THINSAW" with Carbide Tips

Built only by . . . GAY-LEE COMPANY
CLAWSON • MICHIGAN

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AIR POWERED WORK FEEDER

The Bellows TRANSFEED is a two-position work feeder, air-powered, but low-voltage electrically controlled. Complete packaged unit with valve and operating controls built-in. 6" positioning stroke. Fast, positive, accurate.

Write for Bulletin 740A
Address Dept. NED-1054.
1004-A

The Bellows Co.
AKRON 9, OHIO

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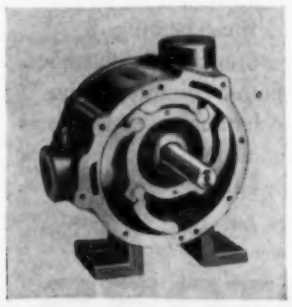
When it has to Run for Years and Years

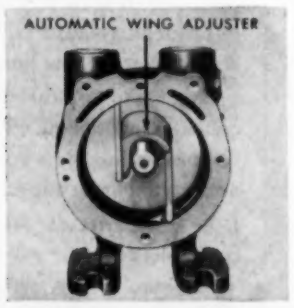
WITHOUT FAILURE

MAKE IT A LEIMAN VACUUM AND PRESSURE PUMP

Leiman users say this:
"Almost continuous operation, 24 hours a day for 21 years"
"Using Leiman pumps on 350 machines. No pump has given a moment's trouble"



4-WING TYPE. Vacuums to 20"; pressures to 15 lbs.; displacement to 162 cfm. Wings take up their own wear, insure positive pressure or vacuum.



2-WING TYPE. Vacuums to 29.9"; pressures to 25 lbs.; displacement to 40.8 cfm. Automatic wing adjuster forces steel blades to meet cylinder wall, no sticking.

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

SEE OUR CATALOG IN SWEETS FILE

LEIMAN BROS., INC.
167 Christie Street, Newark 5, N. J.

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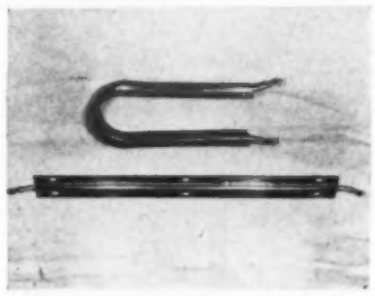
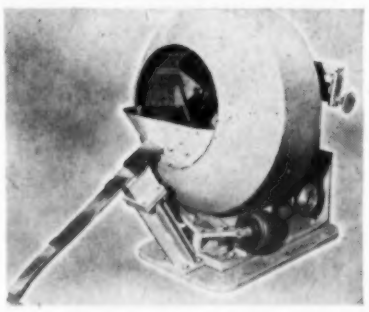
AIR & SURFACE HEATER
made in various lengths and wattages



Pipe, platen, valve and pump, process machinery, compound tank and machine surface heating are potential applications for vane type Calrod heater. Air and surface heating unit is made by pressing a 0.315-in. steel sheath Calrod heater against the center of a 1/16-in. thick steel vane and then brazing. U-shaped depression in vane accommodates the heating element and provides a flat surface for mounting. Shock and vibration resistant unit is rated at 25 w per linear inch or 14.3 w per square inch. It is offered in lengths from 20 to 100 in., 500 to 2500 w, for either 115 or 230 v. Made by **General Electric Co.,** Schenectady 5, N. Y.

▲ For more details circle **NED-589 K4** on enclosed inquiry slip ▲

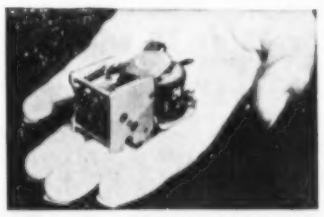
MECHANICAL HOPPER FEED
for washers, nuts, stampings, etc.



Self-contained model 400 tumble hopper feeds a variety of parts at high rate to assembly presses, centerless grinders, secondary operation machines or other high production machinery. It is mounted on a flat base and is powered by a ¼-hp, three-phase motor. Production rate can be changed through an integral variable speed drive. Washers, nut blanks, nuts, special stampings and headed parts up to ½-in. diameter are typical parts handled. Made by **Feedall Machine & Engineering Co.,** Dept. ND, 38399 Pelton Rd., Willoughby, O.

▲ For more details circle **NED-590 K4** on enclosed inquiry slip ▲

MAGNETIC COUNTER
maximum of 1200 counts per minute



Measuring ⅞-in. high and 2 in. long, improved magnetic counter is adaptable to various industrial and experimental functions. It is additive or subtractive and offered with three or four digits. Manually reset counter wheels record to a maximum recommended speed of 1200 counts per minute. Unit is actuated electro-magnetically and can be connected in vacuum tube plate circuits or operated by any contacting device. Availability is with or without cases. Snap door on front of case allows resetting. Windings are to any voltage from 6 to 110 v dc. Made by **Abrams Instrument Corp.,** Dept. S19, 606 E. Shiawassee St., Lansing 1, Mich.

▲ For more details circle **NED-591 K4** on enclosed inquiry slip ▲

CIRCUIT BREAKERS & SWITCHES
are explosionproof and dust-tight

Line of circuit breakers and motor starting switches for hazardous locations is designed for Class I, groups C and D (NEMA type VII); Class II, groups E, F and G; and Class III (NEMA type IX and V). Explosion-proof and dust-tight units have ferrous alloy bodies and aluminum alloy covers. They are available in single or two-gang types with dead-end or through-feed hub arrangement in ½, ¾ and 1-in. sizes. Circuit breaker ratings are up to 30 amp, 120 v ac, while motor starters are made in ratings up to 1 hp. Manual motor starting switches are available with or without overload protection and interchangeable heater units. Made by **Pyle-National Co.,** 1342 N. Kostner Ave., Chicago 51, Ill.

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PROPERLY SPANNING
this SMALL difference

WILL MAKE A BIG DIFFERENCE IN YOUR LOADING COSTS!

This Magliner Dock Board was custom-engineered to meet the exact span requirements of this specific dock! It provides a safe and secure rapid-transit bridge between the dock and the car. As a result, it simplifies and speeds loading operations . . . and greatly reduces dock handling costs! Magliner Dock Boards are strong, safe and dependable. *And,* they're magnesium-light for easy one-man handling! Magliner Dock Boards can lower your dock loading costs too! It will pay you to get the facts.

MagLiner MAGNESIUM DOCK BOARDS

WRITE TODAY for Bulletin DB-204!

MAGLINE INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

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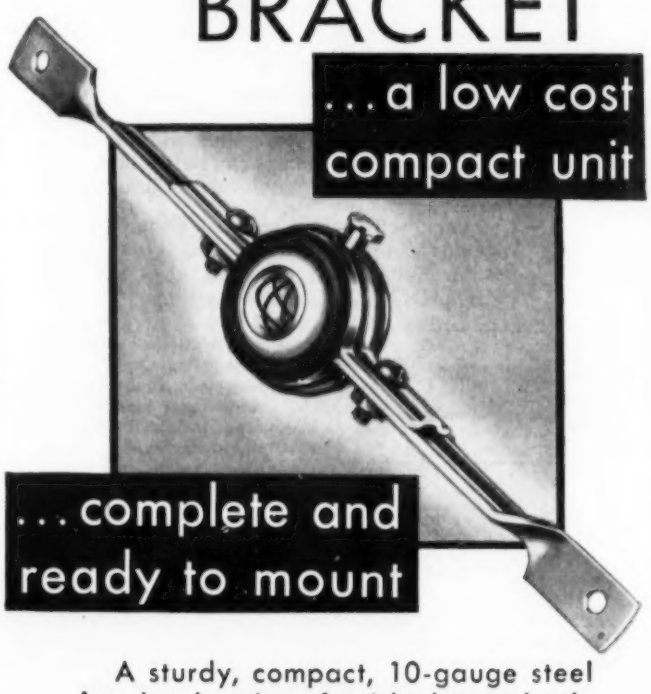
NEW Randall BEARING BRACKET



A sturdy, compact, 10-gauge steel bracket bearing, furnished completely assembled ready to mount, or knocked down, as desired. It features the RANDALL "Deep Well" graphited ball assembly contained in a spherical rubber cushion to assure maximum absorption of vibration, quiet operation, and constant controlled self-alignment.

This bracket retains all the outstanding qualities that the name RANDALL implies —sturdy, low cost, quiet operation, easy installation, constant self-alignment, double lubrication, and long life. Furnished in standard shaft sizes, ⅝", ¾", 15/16", and 1" inclusive. Shaft sizes ½", 13/16" and ⅞" can be furnished on special orders in production quantities.

Write today for additional information, or ask your area distributor to show you Randall's complete line.

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR
GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

Randall

RANDALL GRAPHITE BEARINGS, INC.
1007 S. Greenlawn Avenue Lima, Ohio

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Adjustable AIR BORE GAGES

These Adjustable Air Bore Gages bring to job or production runs the basic advantages of the Dimensionair's stable accuracy, precisely calibrated scale, fast set-up and long range. They can be used with either the 2500 to 1 magnification or 5000 to 1 magnification Dimensionairs, including these now in use in Industry. FOUR GAGES COVER A ½" — 8" RANGE. Particularly in the larger sizes and where holes with large diameters are difficult to reach, those lightweight gages check holes conveniently with air. Gages can be set with gage blocks and measurements transferred to a hole with no significant error. Repetitive accuracy is outstanding. Learn more about this latest development in air gaging. Write FEDERAL PRODUCTS CORP., 41710 EDDY ST., PROVIDENCE 1, R. I.

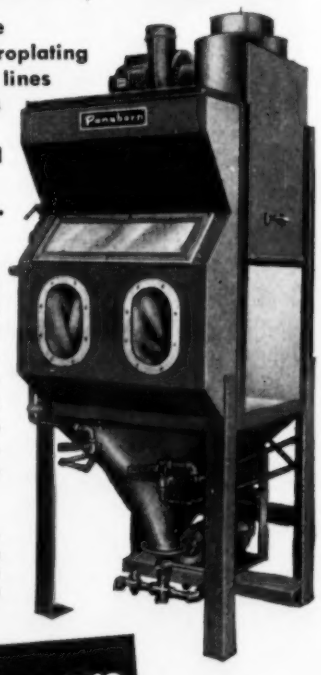
Ask FEDERAL
FOR ANYTHING IN MODERN GAGES...

Dial Indicating, Air, Electric, or Electronic — for Inspecting, Measuring, Sorting or Automatically Controlling Dimensions on Machines

For more details circle NED-596 K4 on enclosed inquiry slip

Pangborn HYDRO-FINISH

- deburrs • removes scale
- prepares surfaces for electroplating
- removes, blends grinding lines
- finishes threaded sections for fit
- improves die making and maintenance
- improves cutting tool life.



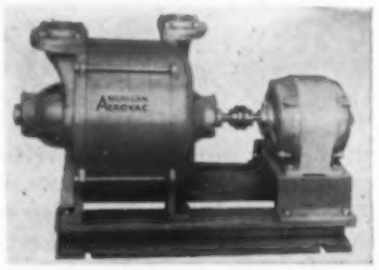
PANGBORN Hydro-Finish does all these jobs and more! Fine mesh abrasives suspended in water give you a precision finish . . . hold tolerances to .0001". Vary abrasives, air pressures, work distances, ratio of liquid to abrasive and you can do almost any finishing job faster and better!

GET THE FACTS on how Hydro-Finish can save you money! Write for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Pangborn BLAST CLEANS CHEAPER
with the right equipment for every job

For more details circle NED-597 K4 on enclosed inquiry slip

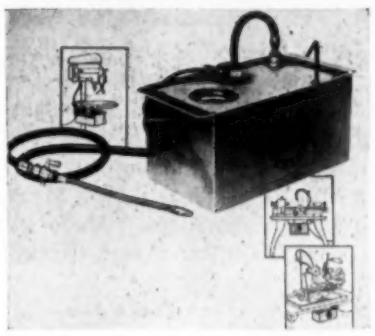
CENTRIFUGAL BLOWERS
air volume delivery is 50-600 cfm



Impeller assembly is only moving part in Aerovac centrifugal type blowers, made in models which produce pressures from 1 to 5 psi and suction from 2 to 7.6 in. of mercury. Motors of 1 to 20-hp drive the blowers which deliver volumes ranging from 50 to 600 cfm. Impeller assembly consists of three or more aluminum alloy, radial closed type impellers, while housing is gray cast iron. Two oversize grease-packed ball bearings support the rotating assembly. Cast iron machined rails on which blower and motor assembly is mounted maintains alignment. Units cannot overload. Made by **Pitz Foundry, Inc.**, American Hydrovac Div., 290 Scholes St., Brooklyn 6, N. Y.

For more details circle NED-598 K4 on enclosed inquiry slip

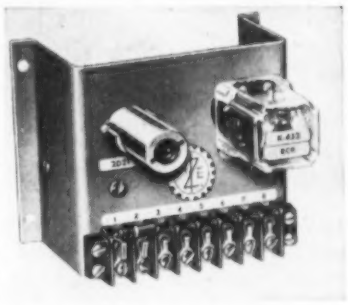
PORTABLE COOLANT SYSTEM
attaches to small machine tools



This self-contained portable coolant system can be easily attached to drill press tables and other small machine tools and benches. Unit measures 13 x 6 x 6 in., has 1-gal capacity and has flow adjustment from trickle to full stream. Permanently sealed pump and motor operate inside tank. Unit pumps from 28 to 180 gph at 3½ psi and at heads up to 8 ft. It is UL-approved. Made by **Viking Industries**, Dept. N, P. O. Box 22, Rockford, Ill.

For more details circle NED-599 K4 on enclosed inquiry slip

ELECTRONIC RELAY
for stop-motion, gaging applications



Compact MEK-2403 electronic industrial relay will allow presence of up to 1 megohm resistance across its control or initiating contacts. Controlling contacts resistance can vary over wide limits from one operation to next. Unit is medium sensitivity relay and is recommended for stop-motion applications, gaging operations and control of various devices from contact making instruments. Control circuit voltage and current are extremely low, allowing use of delicate contacts with minimum separation. Load contacts, provided for control of external circuits, are protected from dust or dirt. Made by **Machinery Electrification, Inc.**, Dept. NED, 35 Hudson St., Northboro, Mass.

For more details circle NED-600 K4 on enclosed inquiry slip

ELECTRONIC CONTROLLER
direct deflection, indicating type

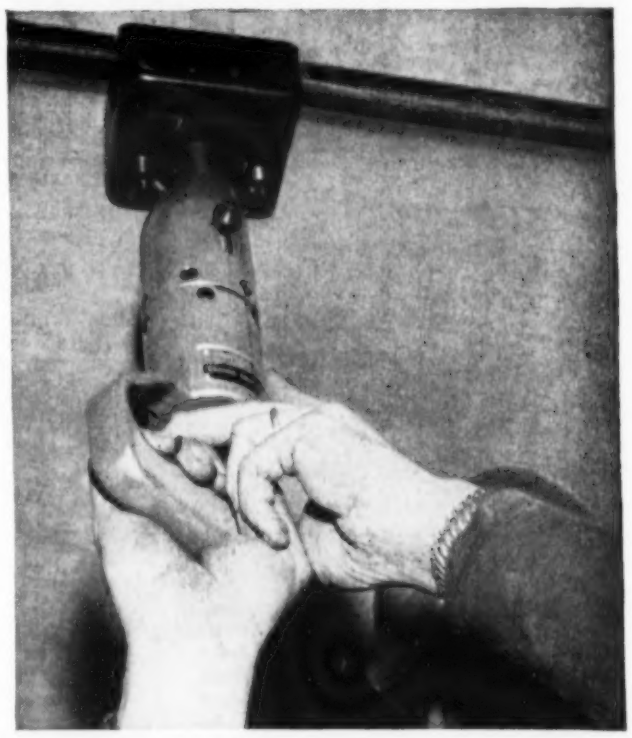
Many forms of this 400 series Capacitrol electronic controller are available for such applications as heat treating furnaces, ovens, glass and ceramic kilns and extruding and molding machinery for plastics and nonferrous metals. This self-contained, direct deflection controller can also be used for indicating and controlling voltages, current, speed and similar variables in process industries. Operating principle is based on precise control circuit which constantly senses changes in the measured variable. Two-compartment die-cast aluminum case can be surface or flush mounted. Upper section contains plug-in measuring system, the lower, a plug-in control chassis. Made by **Barber-Colman Co.**, Wheelco Instruments Div., 1514 Rock St., Rockford, Ill.

For more details circle NED-601 K4 on enclosed inquiry slip

New! VARY-TALLY
Multiple-Unit Reset Counter

Single units, or any combination up to 6 banks high, 12 units wide. Write
VEEDER-ROOT Inc.
HARTFORD 2, CONN.

For more details circle NED-602 K4 on enclosed inquiry slip



Save Up to 80% on Fastening Costs with the REMINGTON STUD DRIVER

"Cuts my conduit anchoring cost by an average of 74%" —writes one electrician about his Remington Stud Driver, and it's a typical report. With a speed of up to 5 studs per minute, this powder-actuated tool is bringing new economy to the job . . . new opportunities for low cost replacement of obsolete wiring systems.

Many maintenance men are finding they can speed up installations, get more jobs done with the Remington Stud Driver. Others tell us that the tool's light weight—6 lbs.—makes overhead work a lot easier. All are agreed that you can't beat it for setting studs in concrete and steel.

What's your fastening job? Whether you're fastening eye bolts for stringing wires or conduit clips to concrete, you'll save money with the Remington Stud Driver. For further information on how this amazing tool can help solve your fastening problems, mail the coupon below.

"If It's Remington—It's Right!"
Remington DU PONT

Listed & Approved by Underwriters' Laboratories, Inc.

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Remington Arms Company, Inc.
Bridgeport 2, Connecticut

Please send me a *free* copy of the new booklet showing how I can cut my fastening costs.

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*Position*_____
*Firm*_____
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For more details circle NED-603 K4 on enclosed inquiry slip

Long Life...Low Net Cost

HAMILTON VARI-PURPOSE HOSE

For higher than average pressures of air, water and a wide range of other materials used by many different kinds of industries.

Withstands deteriorating action of:
OIL — WEAK INORGANIC ACIDS
GREASE — FARM SPRAY SOLUTIONS
GAS — ACETYLENES AND PAINTS (but not lacquers)

Available in standard lengths. Red or black covers. Sizes ¼" to 1½" I.D. with working pressures 125 to 300 lbs.

Write for detailed specifications.

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103 Meade St. Trenton, N. J.

For more details circle NED-604 K4 on enclosed inquiry slip

adjustable UNISTRUT® racks meet changing stock demands

Shelving on this rack is adjustable up or down with UNISTRUT Uni-Clip support. Uni-Clip snaps into slot of UNISTRUT channel and locks in place without tools. Teeth provide non-slip support. Shelves may be added or removed in minutes.

Save time, money...adapt to different needs ...use over and over without loss

Racks that readily adjust to changing stock demands can reduce storage and handling costs to a minimum. That's why so many industries are solving racking needs with adjustable UNISTRUT framing. For this simple framing system is altered or changed as easily as it is erected—without welding, drilling, special tools or skilled labor.

UNISTRUT framing has great load-carrying capacity. It is easy to work with, yet can be used time and again without waste or additional investment. No matter how unusual your racking needs, your UNISTRUT Distributor will be glad to show you how adjustable UNISTRUT framing can be used for low-cost, space-saving racks of all designs.

CUT AND BOLT TOGETHER
Use a hacksaw and wrench!
No drilling, no welding!
100% adjustable and re-usable!

The World's Most Flexible All-Purpose Metal Framing

U. S. Patent Numbers
2327587 2329815 2345650
2363382 2380379 2405631
2541908 Other Patents Pending

Free! Rack catalog and 15 basic UNISTRUT rack designs.

UNISTRUT PRODUCTS COMPANY
1013 W. Washington Blvd.
Chicago 7, Illinois — Dept. N-10

Name.....
Company.....
Address.....
City.....*Zone*....*State*.....

Distributors and Warehouse Stocks in Principal Cities. In Canada, Northern Electric Company. Consult your telephone directories.

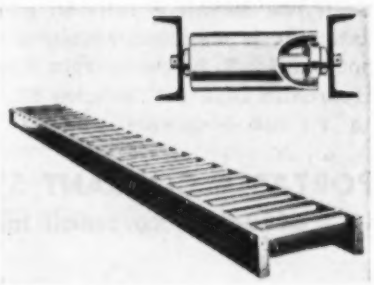
For more details circle NED-605 K4 on enclosed inquiry slip

FLANGE NUT
in ½ through ⅝-in. sizes

Gripco locknuts are now available in flange style in sizes from ½ through ⅝-in. with either NF or NC threads. Both self-locking and standard types are included in this line. A typical application for the one-piece combination nut and washer is as compressor or motor hold-down nut. Made by **Grip Nut Co.**, 323-4 S. Michigan Ave., Chicago 4, Ill.

For more details circle NED-606 K4 on enclosed inquiry slip

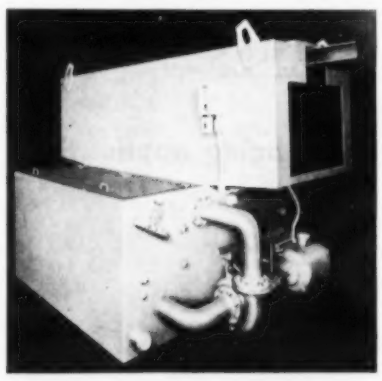
CONVEYOR ROLLERS
3½-in. diameter, support 1000 lb



Four types of anti-friction bearings are available with X3509 conveyor rollers, which are designed for minimum starting and rolling inertia. Non-lubricated dust-proof, grease-packed-for-life and pressure lubricated bearings have metal labyrinth seals. Plain ball bearings are also available. Rollers have 3½-in. diameter, are made of 9-gage steel tubing and have 11/16-in. hexagon axles. Standard mounting is on 4-in. structural steel channel frame. Load rating per roller is 1000 lb on level lines and 730 lb on gravity lines. Made by **E. W. Buschman Co.**, 4482 Clifton Ave., Cincinnati 32, O.

For more details circle NED-607 K4 on enclosed inquiry slip

SPRAY WASHER
spray lengths range from 4 to 10 ft

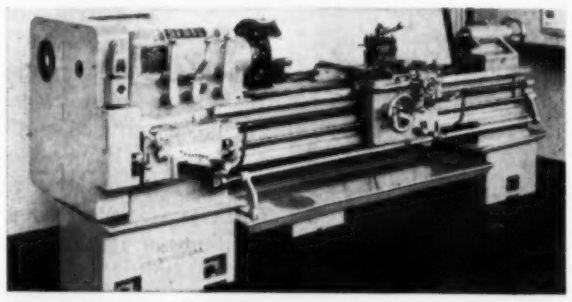


Monorail series 30 iron - phosphate spray washer can be used as a single unit or can be assembled on the premises by bolting or welding to offer a wide variety of combinations. Spray lengths from 4 to 10 ft in 2-ft steps are available. Work up to 30-in. wide can be accommodated, with smaller work economically processed using removable baffles. Steam or gas heated units have washer opening heights ranging from 24 to 60 in. with 6-in. steps. Tanks are of 3/16-in. steel plate with reinforced bottoms, and hold 600 to 1000 gal. Spray nozzles are adjustable and readily accessible. Pumps will handle liquids at up to 180° F. Clean design facilitates maintenance. Made by **Detrex Corp.**, P. O. Box 501-N, Detroit 32, Mich.

For more details circle NED-608 K4 on enclosed inquiry slip

ENGINE LATHE
is 18½-in. swing 10-hp unit

Either 12 or 24 spindle speeds ranging from 13 to 750 rpm can be provided in 16-in. LA series engine lathe. Lathe accommodates either 7½ or 10-hp motors.



Capacity is 18½ in. swing over ways, 24 in. center distance on lathe with 6 ft bed. Headstock has shaved and hardened gears throughout, large Timken antifriction bearings and helical drive gears. Apron, carriage and tailstock are larger than those of previous 16 in. models. Series is also available in a 20 in. engine lathe size and in 16/27 and 20/30 in. removable block gap models. Made by **Nebel Machine Tool Co.**, 3416 Central Pkwy., Cincinnati 25, O.

For more details circle NED-609 K4 on enclosed inquiry slip

NEW! Rapistan® SEALED CASTER

at ⅓ less cost than ordinary non-sealed casters!

5200 Series Rapistan Sealed Caster with Sealed Demountable Wheel

Now, for the first time, this revolutionary Rapistan development gives you a heavy-duty cold-forged *sealed* caster at *⅓ less cost than ordinary leading non-sealed casters!* Save in longer caster life, improved performance, lower maintenance. Dirt, acids, alkalis, brines, other chemicals are *sealed out* of coin-hardened raceways. Ask your Rapistan distributor to show you the comparative service chart, or write direct.

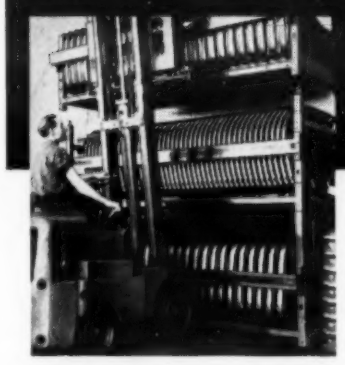
YOURS FREE! *Write for handbook describing Rapistan casters including new 5200 Series.*

The RAPIDS-STANDARD COMPANY, Inc.
284 Rapistan Building • Grand Rapids 2, Michigan

Rapistan® FASTEST GROWING NAME IN CASTERS

For more details circle NED-610 K4 on enclosed inquiry slip

Almost every plant can use MHS WORK CARRIERS Profitably



MHS Work Carriers have standard basic design, are adaptable to any shape or commodity.

MHS Work Carriers save time, labor and space. Use them to carry parts in processing, for storage (they nest and stack easily and securely), and in shipping (the carriers prevent damage in freight car or truck shipment). Take advantage of the simplicity, efficiency and economy MHS Work Carriers can bring to your plant. Write for Catalog R-2.

MECHANICAL HANDLING SYSTEMS INC. AND SUBSIDIARIES
4615 NANCY AVE., DETROIT 12, MICH.
Offices in Principal Cities
FACTORIES: Detroit, Mich. • Fairfield, Iowa • Albany, N.Y. • Windsor, Ont.

For more details circle NED-611 K4 on enclosed inquiry slip

drills up to **6** inches of concrete per minute

...gives lowest cost per foot of concrete drilled with a

TILDEN
ROTARY KONKRETE KORE DRILL

Patented core slot expels cuttings *automatically*

U. S. Pat. No. Re. 23539

Drill straight, clean, ready-to-use holes at speeds up to 6 inches per minute—even through steel reinforced concrete. TILDEN Rotary Koncrete Kore Drills can be used with ordinary electric or rotary air drill. Free Factory sharpening and repair service still available on all Standard TILDEN Drills from 3/16" to 6-inch diameters. Interchangeable shanks for any depth hole.

SOLD BY SUPPLY HOUSES EVERYWHERE

WRITE TODAY for free, illustrated catalog.

TILDEN TOOL Manufacturing Company
209 LOS MOLINOS, SAN CLEMENTE, CALIFORNIA
6657 NORTH CLARK STREET, CHICAGO 26, ILLINOIS

For more details circle NED-612 K4 on enclosed inquiry slip

HOW YOU SAVE . . .
Getting Drier Compressed Air

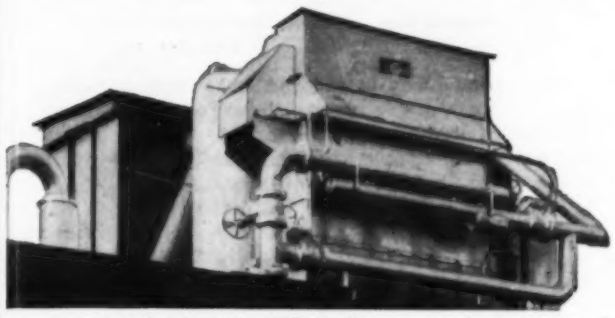
You get lower costs and fewer troubles in the use of all air-operated machines, in paint spraying, in air cleaning or sand blasting, and lower maintenance and repair costs for all pneumatic tools.

The NIAGARA AERO AFTER COOLER assures these benefits because it cools compressed air or gas below the temperature of the surrounding atmosphere so there can be no further condensation in air lines.

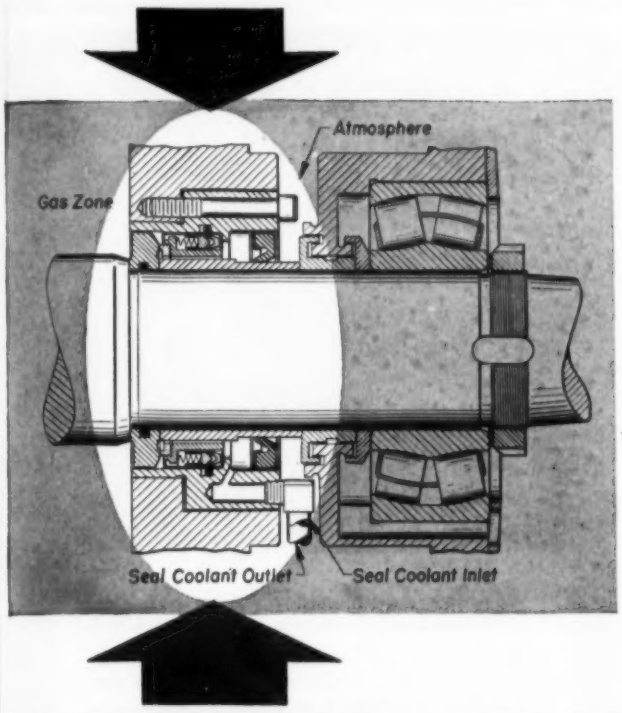
Direct saving of cooling water saves you the price of the Niagara Aero After Cooler in less than two years.

Write for Bulletin No. 98

NIAGARA BLOWER COMPANY
Dept. ED, 405 Lexington Ave., New York 17, N. Y.



For more details circle NED-613 K4 on enclosed inquiry slip



SEALOL SAVES SPACE

A big advantage of Sealol Balanced Pressure Shaft Seals is compactness. This seal, for a rotary compressor, is typical. The complete Sealol assembly takes up less axial and radial space than the anti-friction bearing beside it. By eliminating a deep, multiple-packing stuffing gland, the Sealol Seal permits locating the bearing closer to the load. The overall dimensions of shaft, housing, and assembled machine are reduced, and a time-honored nuisance—the stuffing box — has been completely eliminated.

Other success stories? Plenty of them! Sealol Seals are handling pressures to 1500 psi, rubbing speeds to 15,000 FPM, operating temperatures to 500° F. Our seal specialists have solved many difficult problems involving corrosive gases, hydrocarbon gases, high volatile fluids, and many other special conditions.

Consult Sealol on your shaft sealing problem. Ask for new Bulletin 7, or write us for specific data and recommendations. Sealol Corporation, 47 Willard Avenue, Providence 5, Rhode Island. New York City, Philadelphia, Chicago, Cleveland, Houston, San Francisco, Los Angeles, Kansas City (Mo.), Charleston (W. Va.).

SEALOL
THE BALANCED PRESSURE SEAL

For more details circle NED-614 K4 on enclosed inquiry slip

FIBER BOARD TOTE BOXES
are lightweight, moisture resistant

Extremely lightweight "paper" tote-boxes made of solid moisture-resistant fiber board are practical for handling delicate parts and sub - assemblies. Stepped-back protruding bottom section permits units to nest into one another. Wire reinforcement in top rim adds strength and rigidity. Boxes are 18 in. deep. Shipped knocked-down, boxes are assembled with a power stitcher as needed. Made by **Gaylord Container Corp.,** 201 Cotton Belt Bldg., St. Louis 2, Mo.

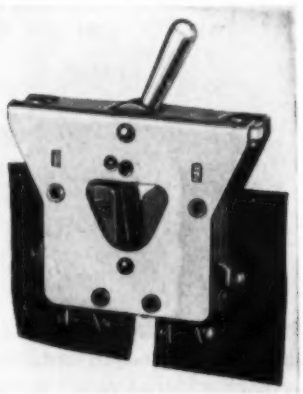
For more details circle NED-615 K4 on enclosed inquiry slip

ELECTRIC HOISTS
in 1000 and 2000-lb capacities

Lug, upper hook and trolley suspensions in capacities of 1000 and 2000 lb are available in series 600 Load Lifter electric hoists. These lightweight pushbutton controlled units are wire rope and drum type and are intended for production lifting jobs. Construction details include high strength, shock resisting aluminum alloy frames, alloy steel gearing with machined teeth, double brakes, magnetic control with only 24 v at pushbuttons, large diameter grooved drums, interchangeable suspension and upper stop to prevent overtravel of hook. Made by **Manning, Maxwell & Moore, Inc.,** Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

For more details circle NED-616 K4 on enclosed inquiry slip

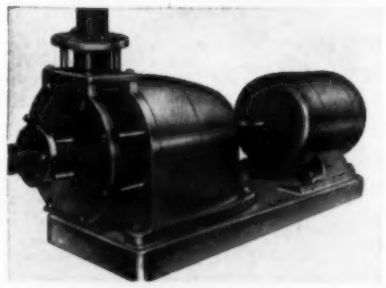
TOGGLE SWITCHES
have three switching positions



Series 11AT toggle switches are compact in design and will make or break circuits in any of three toggle positions. Two single-pole, double-throw basic switches are built into each unit. Six models are available, differing in the combinations of momentary and detented toggle lever positions. Three models have standard AN-3234-1 basic switching. The other three have impact-resistant high-strength plastic case switching units. Many different circuit combinations are available. UL listed, switches are rated 10 amp at 125 or 250-v ac, and ½-amp at 125-v dc. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

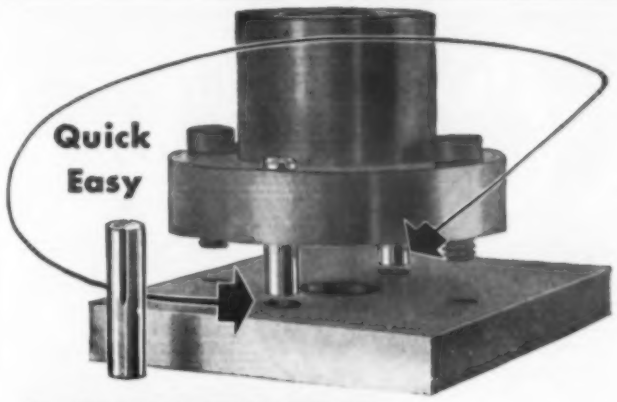
For more details circle NED-617 K4 on enclosed inquiry slip

CENTRIFUGAL PUMPS
are of corrosionproof design



Redesigned centrifugal Impervite pumps are available in six models in capacities from 25 to 200 gpm at heads of 20 to 100 ft. Designed for intermittent or continuous handling of corrosive fluids, they have leak-proof seals fabricated from impervious graphite. Resin-impregnated graphite parts used in pumps are immune to thermal shock, are unaffected by a wide range of corrosive substances and are suitable for operation at temperatures up to 340° F. Design features also include separation of stainless steel shaft and impeller so that either can be independently and quickly serviced. Made by **Falls Industries, Inc.,** 31855 Aurora Rd., Solon, O.

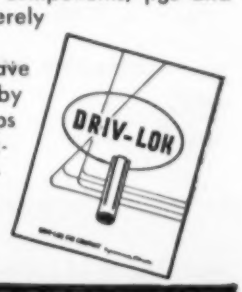
For more details circle NED-618 K4 on enclosed inquiry slip



LOCATING

Design and Production men alike find that Driv-Lok Pins, used as locating or positioning pins, save time and labor in the assembly of machine components, jigs and fixtures. Installation is simple—merely drill a hole and drive in the pin.

Products of every description have been improved and costs reduced by the use of DRIV-LOK Pins. Perhaps they can serve you in your production problems. Our Catalog suggests many typical applications of these versatile pins. Write for it —there is no obligation.



DRIV-LOK PIN COMPANY
717 Chauncey Street, Sycamore, Illinois

For more details circle NED-619 K4 on enclosed inquiry slip

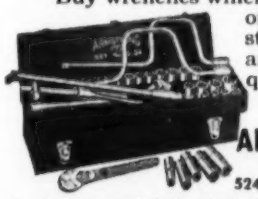
ARMSTRONG WRENCHES

Choose Your Wrenches as you do your friends--for life

Specify ARMSTRONG Wrenches for lifetime service, for finely balanced tools that feel right in the hand and make work easier, faster and less tiring.

Drop forged and machined from high tensile carbon or special alloy tool steels, ARMSTRONG Wrenches are heat treated, tempered and tested to an exact balance of toughness, hardness and tensile strength.

Buy wrenches which carry the trade names HI-TEN or ARMALOY. On carbon or alloy steel wrenches these trade marks are your guarantee of lifetime quality.



Write for catalog.

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVE., CHICAGO 30, ILL.

For more details circle NED-620 K4 on enclosed inquiry slip

ELASTIC STOP NUT CORPORATION OF AMERICA
Dept.R17-1037, 2330 Vauxhall Road, Union, N. J.

Please send me free design information on

ROLLPIN
TRADE MARK

. . . the slotted tubular steel pin with chamfered ends used for production economies in replacing

- ☐ a rivet
- ☐ a set screw
- ☐ a hinge pin
- ☐ a bolt and nut
- ☐ a stop pin
- ☐ a cotter pin
- ☐ a taper pin
- ☐ a dowel

NAME_____ TITLE_____
FIRM_____
STREET_____
CITY_____ ZONE_____ STATE_____

For more details circle NED-621 K4 on enclosed inquiry slip

Easily-installed units for high-efficiency air movement in all duct systems. Direct-driven types for atmospheres within safe motor operating limits or belted models for hazardous fumes, vapors and excessive temperatures. Sizes 12" to 84" with 2, 4, 6, or 7 blades. Capacities to 120,000 C.F.M.

other models for every air-moving requirement

All Aerovent Fans are rated in accordance with the Standard Test Code and U.S.D.C. Comm. Std. CS178-51.

Ask for free folder D-50!

Aerovent Fan Company, Inc.
Ash and Blake Streets Piqua, Ohio

▲ For more details circle **NED-622 K4** on enclosed inquiry slip ▲

Better rubber products are made with Du Pont NEOPRENE

Neoprene gloves protect against acid burns and cuts...save 6¢ per man-hour

Sharp metal parts kept snagging the expensive heavy-gauge rubber gloves used in a midwestern plating company. Workmen's hands were exposed to acids and solvents . . . cuts and burns boosted the plant's injury rate. Finally, various types of gloves were job-tested over a 90-day period. One type proved ideal in every way—a gauntlet-style fabric glove coated with a special neoprene compound.

The neoprene-coated gloves gave maximum protection against snagging and the action of corrosive chemicals. They resisted deterioration and abrasion . . . provided safer, surer handling on the job. Soon there was less time lost through accidents and higher employee morale. And management was able to save 6¢ per man-hour on glove replacements, thanks to the durability of the new gloves.

By turning in top performances such as this, neoprene products are cutting maintenance costs throughout industry. While Du Pont makes no finished goods of neoprene, your manufacturer or distributor will be glad to tell you about the neoprene products he supplies.

FREE! THE NEOPRENE NOTEBOOK
Each issue describes new neoprene products . . . improved old products . . . tips on reducing maintenance costs. Write today for your free subscription. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Div. NE-10, Wilmington 98, Delaware.

NEOPRENE
The rubber made by Du Pont since 1932
DU PONT
BETTER THINGS FOR BETTER LIVING . . . *through Chemistry*

▲ For more details circle **NED-623 K4** on enclosed inquiry slip ▲

STEEL PARTS BINS
can be hung on wall or set on bench

Small parts can be kept at the place of use with Work-O-Matic steel parts bins which are made in seven sizes and have a 3-in. deep hopper front for accessibility to contents. The vertical containers are equipped with hanger angles so they can be hung on wall or framework behind work bench. All sizes are 6 in. from front to back measured at the bottom and top. Largest bin is 18 in. wide and 24 in. high, while smallest unit measures 6 x 6 in. Made by **Union Metal Mfg. Co.**, Dept. NE, Canton 5, O.

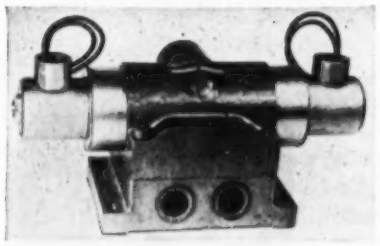
▲ For more details circle **NED-624 K4** on enclosed inquiry slip ▲

SCOOP TYPE SHOVELS
attachment for fork lift trucks

Loose and bulk materials can be loaded into and unloaded from trucks, hoppers, bins and freight cars with two scoop type shovel attachments for Buda fork lift trucks. Hydraulic and mechanical units are interchangeable with standard forks and are easily mounted. Both models mount directly to the fork hanger bar, with the hydraulic unit connecting to the truck's hydraulic system by quick-detachable hose couplings. Made by **Buda Co.**, Dept. LF, 15440 Commercial Ave., Harvey, Ill.

▲ For more details circle **NED-625 K4** on enclosed inquiry slip ▲

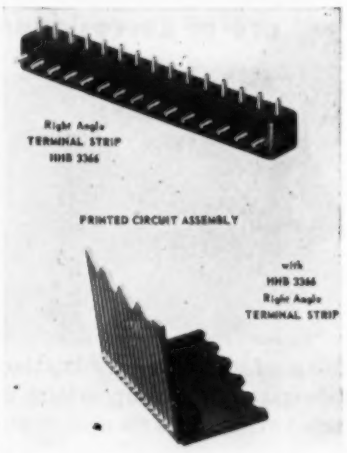
FOUR-WAY VALVES
for 200-psi air or hydraulic service



Only moving part in MV series four-way valves is the one-piece spool which carries the only moving seals employed. These are easily replaced standard O-rings. Suitable for air or hydraulic service to 200 psi, valves can be adapted to subbase, manifold, panel, console or conventional piped installations. Attachments provide for operation by lever, palm button, foot pedal or treadle roller, cam, solenoid, pilot or remote bleeder button. Parts are standardized and interchangeable. Made by **Modernair Corp.**, Dept. NED, 400 Preda St., San Leandro, Calif.

▲ For more details circle **NED-626 K4** on enclosed inquiry slip ▲

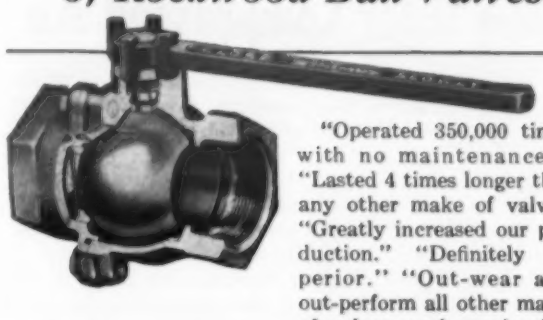
RIGHT ANGLE TERMINAL STRIP
for periphery assembly of circuits



Right angle terminal strip No. 3366 facilitates periphery assembly of printed or etched circuits by fast dip method of solder points. Strip has fifteen 0.040-in. diameter terminals along each side, and omission of certain terminals can be made to requirements. Nominal creep is 3/32-in. Pins are phosphor bronze with plating of gold over silver. Terminals extend through cards 1/16, 1/8, and 1/4-in. thick. Strip material is standard 3700 green mineral filled phenolic, or can be obtained in mineral filled phenolic type MFE, diallyl phtalate MDG, or general purpose phenolic CFG. Made by **H. H. Buggie, Inc.**, Dept. CRT, 700 Stanton St., Toledo 4, O.

▲ For more details circle **NED-627 K4** on enclosed inquiry slip ▲

Users applaud performance of Rockwood Ball Valves



"Operated 350,000 times with no maintenance." "Lasted 4 times longer than any other make of valve." "Greatly increased our production." "Definitely superior." "Out-wear and out-perform all other makes of valves used previously." "Safest for handling inflammable gas." "Operated 500 times a day without maintenance for over a year."

These and many other enthusiastic comments praise the efficiency of Rockwood Ball Valves — an efficiency based on these exclusive features:

- Full, round flow
- Quick opening and closing
- Longer wear-resistance
- Leakproof seal

Plan now to put these benefits to work in your plant. Valves come in all pipe sizes. Tested and listed by Underwriters' Laboratories, Inc. Write today for complete information. Rockwood Sprinkler Company, 510 Harlow Street, Worcester 5, Mass.

ROCKWOOD BALL VALVES
For full, round flow efficiency

▲ For more details circle **NED-628 K4** on enclosed inquiry slip ▲

Makes it Easy to Set-Up
for ANGULAR GRINDING...

Magna-Lock electro-magnetic **SINE CHUCK**

Eliminate time-consuming trial-and-error methods. Make single or compound angle set-ups in *minutes*. Gauge-block accuracy. Simple locking mechanism maintains set-up.

Get details, DEPT. ND-104

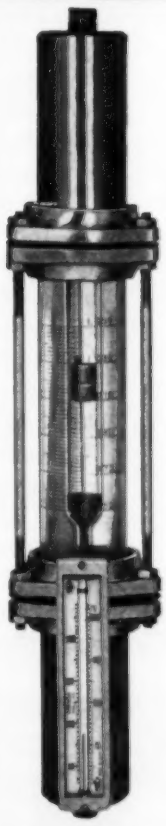
Magna-Lock magnetic chucks and devices.

MAGNA-LOCK, INC.
BIG RAPIDS, MICHIGAN, U. S. A

▲ For more details circle **NED-629 K4** on enclosed inquiry slip ▲

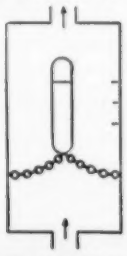
Indicates Density of Piped Liquids — *at a glance*

Princo Densitrol



A simple, rugged instrument—permanently installed in the pipe line. Gives you continuous sight readings of both density and temperature of flowing liquids such as brine, acids, component solutions and numerous other process materials. Because indicating plummet is totally submerged (unlike hydrometer), there is no surface tension or meniscus effect—thus, readings are easier to make, more accurate. For specifics on calibrations, materials of construction, etc., request Bulletin W-3.*

*Bulletin W-3 also covers models with electrical indicators for use where liquid opacity prohibits sight readings or where automatic temperature compensation, remote indication or actual control of density is desired.



PRINCO Since 1910

PRECISION
THERMOMETER & INSTRUMENT CO.
1434 Brandywine Street, Philadelphia 30, Pa.

Makers of precision-built thermometers, barometers, hydrometers, gauges, indicators, mercury in glass thermo-regulators.

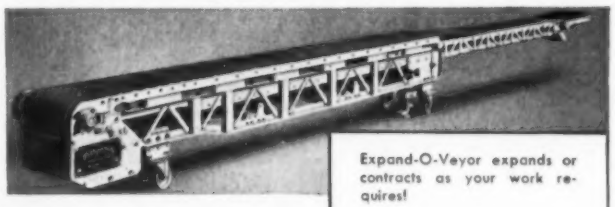
▲ For more details circle **NED-630 K4** on enclosed inquiry slip ▲

NEW JABSCO PORTABLE SELF-PRIMING MOTOR-PUMP UNIT

Weighs only 29 lbs.
List Price $58.50

Jabsco announces the immediate availability of the outstanding Model 2187 Portable Motor-Pump Unit, *with capacity of 600 GPH at 10′ head.* Satisfied users find this versatile unit solves many pumping needs in industrial, farming, plumbing and marine uses. Model 2187 pumps coolants, circulates and transfers liquids, returns spilled liquids to process, drains cellars and sumps, pumps waste water to sewer, pumps out flooded basements, cesspools, and many other vital uses. Model 2187 is equipped with a close-coupled Jabsco bronze Pump with mechanical seal. Ports are threaded for standard ¾″ external garden hose connections, with ½″ IPS optional upon request. Heavy duty capacitor type ¼ HP Wagner electric motor with overload protector powers the unit. Motor is rated at 1725 RPM, 60 cycles—115 volts A.C. Comes with 6 ft. cord with ground wire and plug. Form-fitting handle folds away for easy storage. Also available at additional cost, D.C. motor units, 32 volt and 110 volt. Model 2187 is ready for instant use, and requires no additional equipment. No lubrication is required, no contamination of liquid pumped. Instantly self-priming with dry suction lifts to 15′, up to 25′ primed. For complete information, write **Jabsco Pump Company,** 2031 North Lincoln Street, Burbank, California. *Advt.*

▲ For more details circle **NED-631 K4** on enclosed inquiry slip ▲



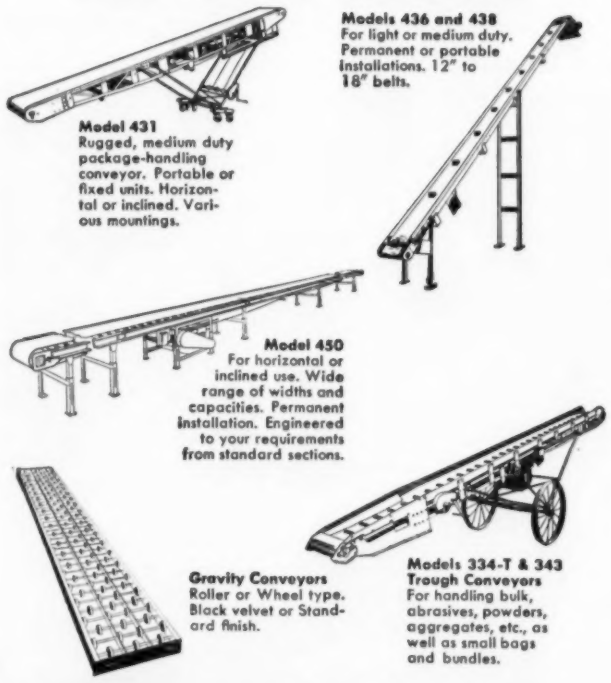
Expand-O-Veyor expands or contracts as your work requires!

Eliminates lost time caused by shifting equipment!

Where can *you* use this new FARQUHAR Package-Handling *EXPAND-O-VEYOR?*

Use this new Farquhar Expand-O-Veyor at maximum length settings one day . . . at minimum the next day. Ideal for use on the end of a fixed conveyor system, permitting the discharge point to be varied without moving your entire line. Perfect for loading and unloading trucks—can be shortened or expanded as the truck becomes loaded or emptied. Get more information about this new Expand-O-Veyor's versatility today. Write to the address shown below, telling us what you move. There's no obligation, of course.

FARQUHAR HAS CONVEYORS FOR EVERY PURPOSE



OLIVER Farquhar CONVEYORS

FREE! "Owners Report"—a booklet of case histories describing money-saving Farquhar conveyor installations. Write: THE OLIVER CORPORATION, *A. B. Farquhar Div.,* Dept. O-04, York, Pa.

POWER-BELT & GRAVITY CONVEYORS

▲ For more details circle **NED-632 K4** on enclosed inquiry slip ▲

RESIN ABRASIVE WHEELS
reinforced against shattering

Extreme peripheral as well as side bending or wedging stresses can be taken by Saftex hard resin abrasive wheels which are reinforced against shattering. Wheels make jamming, wedging, taper cutting, notching or portable cutoff work less hazardous. Straight wheels are made in thicknesses of ⅛ to 1 in. and diameters from 3 to 12 in. Saftex depressed center disks are also available in 7 and 9-in. diameters and thicknesses of ⅛, 3/16, ¼ and ⅜ in. for use on right angle grinders. Made by **Metal Removal Co.,** 1548 N. Orleans St., Chicago 10, Ill.

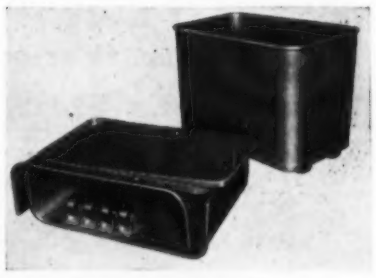
▲ For more details circle **NED-633 K4** on enclosed inquiry slip ▲

LEATHER OIL SEAL
operates at 200° F without leakage

Low torque operation with no measurable leakage even at 200° F is provided by this Micro-Torc leather oil seal. Unit consists of chrome-retanned leather sealing lip coated with dry lubricant and elastomer material which renders walls of sealing lip impervious to lubricants. Center portion of sealing member retains natural porosity of leather, allowing it to absorb and store lubricant for use when normal supply is exhausted. This feature makes unit practical for starved or semi-starved sealing applications. Made by **National Motor Bearing Co.,** Dept. N, Broadway at National Ave., Redwood City, Calif.

▲ For more details circle **NED-634 K4** on enclosed inquiry slip ▲

STEEL FLOOR TRUCKS
are round-cornered, knock-down type



Round - cornered, knock-down type floor trucks have smooth rolled tops, 18-gage steel construction, angle base frames, channel caster supports and 5-in. roller bearing steel casters. Trucks are practical for use in textile, warehousing and metalworking industries. Standard sizes available are 36 x 22 x 24 in., 40 x 24 x 24 in., 42 x 30 x 28 in., 48 x 30 x 28 in. and 56 x 22 x 28 in. Easy to handle in narrow aisles, units are also available in aluminum or stainless steel on special order. Made by **Kennett Equipment & Machinery Co.,** Kennett Square, Pa.

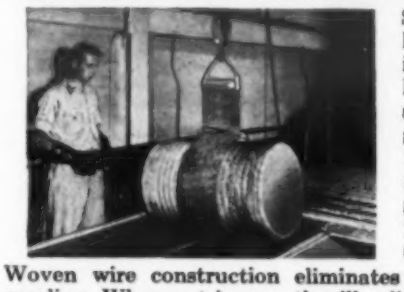
▲ For more details circle **NED-635 K4** on enclosed inquiry slip ▲

ROTARY OFFICE FILE
made in four cabinet sizes

Up to 37 per cent of the entire contents of the Master Junior rotary file is always in view and accessible to the operator. File is made in four cabinet sizes identified as Nos. 25, 35, 45 and 60 and will accommodate record sizes from 2 x 3 to 12 x 14-in. without alteration. It has removable 10-in. trays and is 38½ in. high. Unit operates by pushbutton and foot pedal control, with manual operation possible in event of power failure. It makes one revolution in 9 seconds in either direction. Working trays are flush with shelf on front of machine. Made by **Ferris Business Equipment, Inc.,** Dept. 23, 244 Great Meadows Rd., Stratford, Conn.

▲ For more details circle **NED-636 K4** on enclosed inquiry slip ▲

GRIPPER WOVEN WIRE SLINGS
give you GREATER UTILITY



Specially designed handles permit use in choke or basket hitch. Broad, flat sling body gives greater load stability. Complete flexibility gives greater gripping power, even around small radius loads.

Woven wire construction eliminates kinking, tangling, snarling. When not in use, they'll roll up into a compact coil or hang flat against a wall.

All metal construction means long life, freedom from damage, even in handling sharp edged loads.

Available in standard lengths and widths with capacities up to 100,000 lbs. Special sizes on request. Every sling pretested to meet loading specifications.

The Cambridge Wire Cloth Co.
Dept. R • Cambridge 10, Md.

OFFICES IN PRINCIPAL INDUSTRIAL AREAS

See your mill supply, materials handling or safety equipment distributor. Or, write direct for complete catalog and name of nearest distributor.

DISTRIBUTORS—write for open territory data!

▲ For more details circle **NED-637 K4** on enclosed inquiry slip ▲

for accurate Voltage Control of small ac machines

- No vibrating or sliding contacts to require attention.
- Special dust-proof design assures maximum protection.
- *Rocking Contact* sector gives quick regulation with small movement.
- Four simple connections and it's ready to operate.

Only a small rocking movement of the contact sector over the curved commutator is required to cover the entire regulating range. Response is fast, accurate . . . sliding friction is eliminated, wear minimized.

V-00 regulator is used on ac generators with direct-connected exciters to 157 kva at 3600 rpm. Type 221 is used on ac machines with direct-connected exciters to 438 kva at 3600 rpm. These regulators can be modified for temperature compensation, shock mounting, or other special requirements.

Ask your A-C representative, or write Allis-Chalmers, Milwaukee 1, Wisconsin, for Bulletin 14B6143A.

A-4361 *Rocking Contact is an Allis-Chalmers trademark.*

ALLIS-CHALMERS

▲ For more details circle **NED-638 K4** on enclosed inquiry slip ▲

GOOD NEWS ABOUT WHEELS

NEWS! About how 44 centers and only 22 bearings give a choice of 144 sizes to 12″ x 4″.

NEWS! About American Steelite® light-weight champs—weighing up to 9 pounds less than ordinary wheels.

NEWS! About American Tread-Lock method—the tread is *Rolled On So It Won't Roll Off!*

NOW! Get all this NEWS in the NEW bulletin on American Industrial Wheels, from:

THE AMERICAN PULLEY COMPANY, Phila., Pa.

The American Pulley Company 4294 WISSAHICKON AVE., PHILA. 29, PA.

Gentlemen:
I want the NEWS about Wheels—rush me your new American Steelite® Wheel Bulletin.
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Firm Name_____
Address_____
City_____ Zone____ State____

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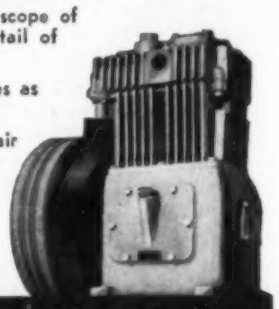
FREE! 16 IDEAS

FOR PUTTING COMPRESSED AIR TO WORK

Send for *"Air Makes Things Hum."* It contains . . .

- 12 pages of stimulating ideas on compressed air use all based on actual applications now functioning at a profit
- illustrated clearly with the full scope of the industrial operation, plus detail of compressor location
- including industrial safety devices as well as production short cuts



You'll see a way to put compressed air to work in your plant or on your product. *"Air Makes Things Hum"*—thought provoking, practical, FREE. Send for your copy now. Write Dept. NE-38.

Quincy COMPRESSORS — QUINCY COMPRESSOR CO. QUINCY, ILLINOIS

Makers of the World's Finest Air Compressors.

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Choose the hoist that fits the job!

Heavy Duty

SHEPARD NILES Hoist

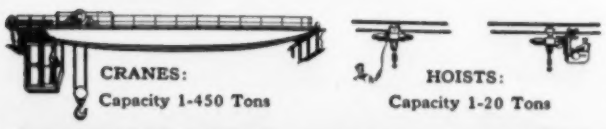
Types: Lug Suspension, Hook Suspension, Base Type, Push Trolley, Geared Trolley, Motor-driven Trolley.
Controls: Pendant Rope, Push Button, Outrig, Remote.
Speeds: To meet your requirements.
Capacities: 500 to 40,000 lbs.

- It pays to choose the right hoist for your lifting job . . . the wrong choice can be costly! Let a Shepard Niles representative guide you in selecting the hoist that best suits your needs. He's a specialist in through-the-air handling . . . knows which model, capacity and controls will be right for your use.

Light Service

SHEPARD NILES LIFT ABOUT-JR.

Types: Lug Suspension, Hook Suspension, Push Trolley.
Controls: Single Speed, Push Button, Rope Operated.
Capacities: 250, 500, 1000, 2000 lbs.



CRANES: Capacity 1-450 Tons
HOISTS: Capacity 1-20 Tons

SHEPARD NILES CRANE AND HOIST CORPORATION

MAIL COUPON

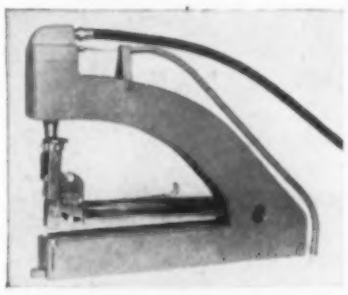
SHEPARD NILES Crane and Hoist Corp.
1836 Schuyler Ave., Montour Falls, N.Y.

( ) *Please send me your new Lift About-Jr. Bulletin.*
( ) *Please send me your Shepard Niles Hoist Bulletin.*
( ) *Have a Shepard Niles representative call on me.*

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle **NED-641 K4** on enclosed inquiry slip ▲

POWER STAPLER
is portable, bench type machine



A wide variety of heads and staple sizes can be used with model KAD air-powered foot-operated bench stapler. Foot control leaves operator's hands free for work handling. Typical jobs handled include fastening merchandise to display cards, sealing shipping envelopes and small bags and light assembly work. Stapler weighs 15 lb, is easily moved from job to job and can be set up in a matter of minutes. Units can be ganged for high production jobs. Small width permits center-to-center spacings as small as 2 in. Almost all jobs can be done on 60 psi line pressure. With light staples, 25 to 30 psi is ample. Made by **Bostitch,** 1020 Mechanic St., Westerly, R. I.

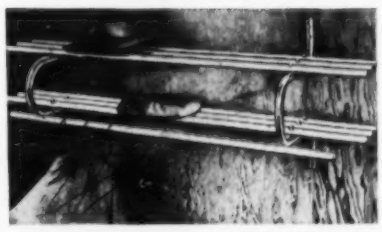
▲ For more details circle **NED-642 K4** on enclosed inquiry slip ▲

COOLANT SYSTEM
for machine tool and other uses

Improved model FS-1A coolant system is readily carried from job to job. It is suitable for use on a wide variety of machine tools, and for other applications requiring coolant flows up to 2 gpm. Unit has 1/30-hp shaded-pole motor available for 110 or 220 v current. Pump has built-in removable strainer and delivers 2 gpm water at a 5-ft working head. It will handle No. 10 oil at reduced capacity. Bronze valve and nozzle, oil resistant hose, cord, plug and switch are fitted. Rust-resistant steel tank has 3½-gal capacity. Made by **Easy Industries,** Dept. NED, 162 N. Clinton St., Chicago 6, Ill.

▲ For more details circle **NED-643 K4** on enclosed inquiry slip ▲

HAT & COAT RACK
in aluminum floor and wall models



Aluminum hat and coat racks available in both floor and wall models are of bolted construction. Wall models are offered in 2, 3, 4, 6, 8 and 10-ft widths, while floor units are made in 3, 4 and 5-ft widths. Both types can have either single or double hat and package shelves. Three wall brackets are furnished with all wall racks over 6 ft wide. Buffing and polishing process assures permanent high-luster qualities. Made by **Safway Metal Products Co.,** Dept. N, 1111 Webb Ave., Detroit, Mich.

▲ For more details circle **NED-644 K4** on enclosed inquiry slip ▲

WELDING & CUTTING OUTFIT
same blowpipe does all jobs

An all-in-one blowpipe with interchangeable welding and cutting tips is featured in this Prest-O-Lite portable oxyacetylene outfit for light-to-medium welding and cutting work. The same blowpipe heats, bends, solders, brazes, welds and cuts. Welds can be made on up to 3/16-in. steel and cuts made in ⅜-in. solid steel. Other kit items include one cutting and three welding tips, oxygen and acetylene pressure regulators, fitted double hose, friction lighter, goggles and wrench. With any size tip, blowpipe weighs only 17 oz and is about 13 in. long. Offered by **Linde Air Products Co.,** Room 308-NED, 30 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-645 K4** on enclosed inquiry slip ▲

FAR LESS TIP BREAKAGE with "RING SEAT" CENTER DRILLS

USE "RING SEAT" CENTER DRILLS

IF YOU GRIND BETWEEN CENTERS

The "R" type, curved contour Ring Seat center drills give you a stable, accurate, precision center, quickly restored after heat-treat.

Ring Seat center drills produce a protected center at no extra cost—and carry a built-in discount because they last longer.

Lapping Centers After Heat Treat

is a simple quick operation, done in about one-third the usual time. Lapping with a rotating felt wick removes heat scale and restores a perfect center—at the original place.

A PREMIUM DRILL AT NO EXTRA COST

Ideal for Turning Tapers

LINK INDUSTRIES
13838 Elmira Detroit 27, Mich.
FREE CIRCULAR

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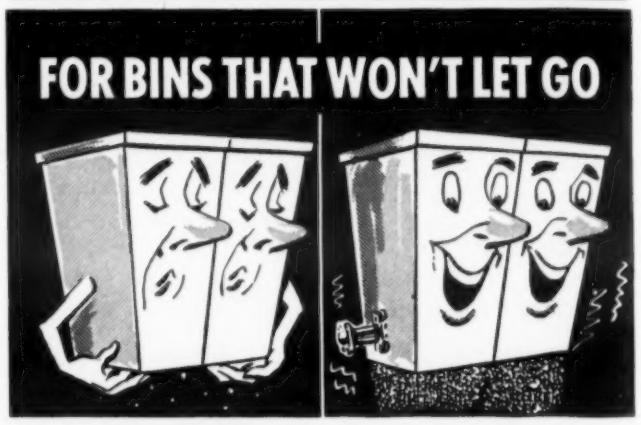
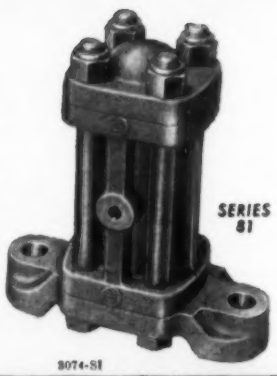
FOR BINS THAT WON'T LET GO



specify SPO air vibrators

Your best insurance against bin stoppage is SPO air vibrators. These low-cost units deliver powerful blows that end jamming, packing and clogging of powdered or granular materials. SPO air vibrators are available in types and sizes to meet all requirements.

Write for Bulletin 50 for complete details



SPO INCORPORATED
6475 Grand Division Avenue • Cleveland 25, Ohio

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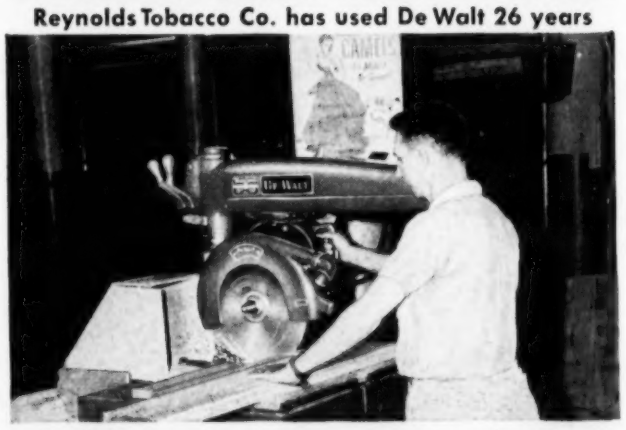
All-Purpose AMF De Walt is best for plant maintenance!

Reynolds Tobacco Co. has used De Walt 26 years



You'll find *one* low-cost AMF DeWalt® will meet *all* your plant maintenance needs—and that includes all types of construction work and boxing and crating.

Just one DeWalt turns out pallets, conveyor bucks, crating, book shelves, ladders and many other products. It's amazingly versatile—cross-cuts, miters, bevels, rips, dadoes, shapes and many others! Tops in speed, accuracy and safety, too.

Send for catalog to DeWalt Inc., Dept. NED-54-10, Lancaster, Pa.

DeWalt Inc. Lancaster, Pa.

DEWALT POWER SAWS

In Canada: DeWalt Canada Ltd., Guelph, Ontario

Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY, *New York*

▲ For more details circle **NED-648 K4** on enclosed inquiry slip ▲

RUBBER CIRCULAR KNIVES AND HAND CUTTING TOOLS

LEATHER CUTTING TOOLS OF EVERY DESCRIPTION

VEGETABLE AND FOOD PACKERS KNIVES

HOME AND INDUSTRY FOOD SLICING KNIVES

WRITE FOR SPECIFICATION CHART

HYDE MANUFACTURING CO. SOUTHBRIDGE, MASS.

For more details circle NED-649 K4 on enclosed inquiry slip

SPECIALS may match the prices of STANDARDS

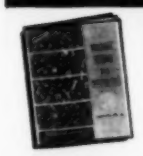
If ordered in fair quantities, recessed hex head screws cost no more than standard machine screws, and actually much less than trimmed hex head screws.

The saving results from elimination of one production operation, without loss of mechanical values. The difference is in appearance. And even that may be in favor of the recessed head.

To order only, made to standard dimensions in sizes to suit your needs or to your specifications.

Get our prices and deliveries on your requirements. In fact write us about special upset, and rolled thread products of any kind. The cost may be lower than you think.

MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS


WRITE FOR OUR CATALOG

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

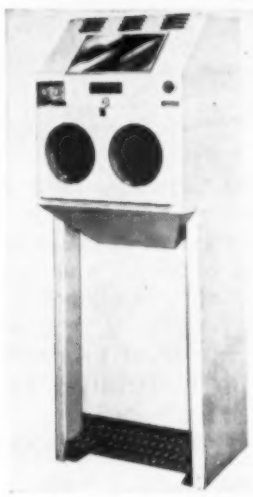
For more details circle NED-650 K4 on enclosed inquiry slip

REPRODUCTION MACHINE
dry copies made in 45 seconds

Operating principle similar to that employed by self-developing camera is utilized by the Hecco-kwik reproduction machine which produces dry copies of any typed, printed, written or drawn material. Original is inserted into machine together with light sensitive paper. A negative is produced through exposure to light source. Unexposed silver from negative is transferred to second sheet of Hecco-kwik paper, producing a positive image. Process requires less than 45 seconds. Amount of light striking the original is adjustable for copy material density and opaqueness. Machine takes material up to 12 in. wide, any length. Made by **Hunter Photo Copyist, Inc.**, 586 Spencer St., Syracuse, N. Y.

For more details circle NED-651 K4 on enclosed inquiry slip

WET-BLAST PARTS CLEANER
operates in conjunction with a 3-hp air compressor



Added to Pressure Blast line of wet-blast parts cleaners is this Pressure Blast, Jr. model designed for installation where the compressed air supply may be low. Unit can be operated in conjunction with 3-hp compressor and works on aspiration principle which relies upon a venturi in the blast gun to raise abrasive and water mixture up from hopper.

Among its features are motor-driven paddle agitator for abrasive mix, self-supporting trigger gun, foot pedal window wash actuator, single front work loading door with open end armports, louvers for free air induction, stainless steel construction, 150-w explosionproof spotlight and heavy duty blower for good visibility while operating. Made by **Cro-Plate Co.**, Dept. N, 747 Windsor St., Hartford 5, Conn.

For more details circle NED-652 K4 on enclosed inquiry slip

BUCKET LOADER
hydraulic, lifts up to 4000 lb

Front wheel drive through a torque converter, rear wheel steering, four wheel brakes and four forward and four reverse speeds are among features of model GFT bucket loader. Speeds up to 20 mph are available. Unit is powered by a Ford V-8 industrial gasoline engine, and has a ¾-yd hydraulically operated bucket. Lifting capacity is 4000 lb. Turning radius is 11 ft 8 in., and bucket can be lifted up to 12 ft 5-in. high. Power Crowd feature permits operator to fill bucket without forward movement of tractor. Including snow and trash buckets, dozer blade, lift forks and crane hook, a complete line of attachments is available. Made by **Lessmann Mfg. Co.**, Dept. NED, 20th & Easton Blvd., Des Moines 4, Iowa.

For more details circle NED-653 K4 on enclosed inquiry slip

Steel Scaffolding

Sharon Steel Corp., Brainard Steel Div.—Principle of assembly of Brainard scaffolding system, using slip-fit arrangement, is covered in 12-page bulletin. Various applications are shown. Scaffolding has only one basic part, a tubular steel frame which, when slip-fitted to other sections, can be erected in single towers of any height. All other components are illustrated.

For more details circle NED-654 K4 on enclosed inquiry slip

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings.....only **$36.00**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

For more details circle NED-655 K4 on enclosed inquiry slip

SPEEDS CATERPILLAR-BUILT TRACTOR EQUIPMENT

The ease and speed with which dies can be changed on Steelweld Presses and necessary adjustments made have proven a big asset in obtaining high production of a great variety of steel parts for scrapers, rippers, bulldozer blades and wagons at the Joliet Plant of Caterpillar Tractor Co.

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6655 E. 281st St., Wickliffe, O.

STEELWELD PRESSES

For more details circle NED-656 K4 on enclosed inquiry slip

At an average cost of less than $10 per machine NOW you can REDUCE VIBRATION SIMPLIFY INSTALLATION with **UNISORB**® Mounting Pads

Your first saving with this modern machine installation method is in the cost of the UNISORB mounting pads . . . an average of less than $10. per machine. And savings in first cost are only the start.

Add to that the saving of 10% to 30% in cost of time and labor for installation, plus the advantage of eliminating up to 85% of transmitted machine vibration. Get the facts about installing your lathes, presses, grinders, etc. on UNISORB.

Return the coupon today for your free copy of FACTS ABOUT ANCHORING YOUR MACHINES ON UNISORB.

The **FELTERS** Company
224 South Street, Boston 11, Mass.

Please send my free copy of FACTS ABOUT ANCHORING YOUR MACHINES ON UNISORB.

Name.....Title.....
(Please Print)

Company.....

Address.....

City.....Zone....State.....

Return to The FELTERS Company
224 South Street, Boston 11, Mass.

For more details circle NED-657 K4 on enclosed inquiry slip

Spindles like These

GIVE YOU PRECISION AND PROFIT FROM YOUR GRINDERS!

Select yours from *hundreds* of Ex-Cell-O precision grinding spindles—all standard models. For years they've been the original equipment choice of leading grinder manufacturers. There's *full information* in the 80-page Ex-Cell-O Spindle Catalog. Write us to send it!

54-9

▲ For more details circle NED-658 K4 on enclosed inquiry slip ▲

CAMCAR

COLD-FLOW SKINS THE COST CAT

. . . by *pressure-forming* metal parts from wire stock . . . in contrast to older methods that cut out parts from large diameter bars. And Cold-Flow skins the cat in other ways . . . reduces assembly time, by forming single intricate shapes replacing two and three-part units.

Cold-Flow strengthens the stock. Metal grain smoothly follows the part contour . . . is particularly compressed at the surface for a smooth wear-resistant hide. A prolific producer in most all metals, Cold-Flow delivers parts in volume to keep your assembly purring.

Send us specs and samples. Or ask for a field specialist.

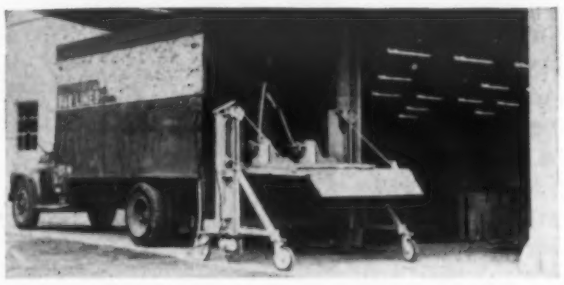
CAMCAR COLD-FLOW

CAMCAR SCREW & MFG. CORP.
ROCKFORD, ILLINOIS
TELEPHONE 5-9451
TELETYPE RK-8653

▲ For more details circle NED-659 K4 on enclosed inquiry slip ▲

PORTABLE LOADING DOCK has 6000-lb capacity, 56-in. lift

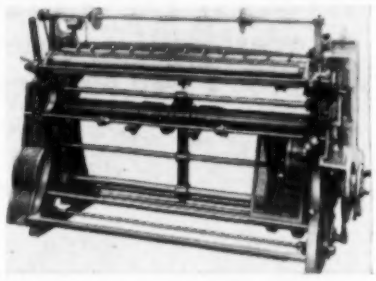
Loading or unloading of highway trucks from ground level is facilitated by this portable elevator type loading dock which can be rolled by two men up to



truck's tailgate. Dock has capacity of 6000 lb and will raise loads to 56-in. height. Hydraulic elevating mechanism is battery or alternating current powered. Unit can be used either inside or outside plant. It folds up for storage. Made by **Raymond Corp.**, 41-126 Madison St., Greene, N. Y.

▲ For more details circle NED-660 K4 on enclosed inquiry slip ▲

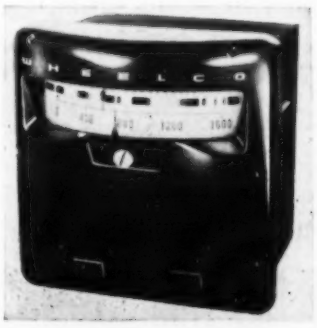
ROLLED MATERIAL CUTTER for cloth, plastics, other materials



Slitting and cutting of rolled material on a production basis can be performed on the Kolbus cloth cutter. Automatic machine will cut linen, artificial leather, cloth, gauze, plastics and other materials furnished in rolls. It can be used as a sheeter by separating the slitting knives and as a slitter by disengaging the cutting knives and making minor adjustments. Material up to 56 in. wide can be handled with any cut-off up to a maximum of 36 in. at rate of 15 to 35 cuts per minute. Excess material is automatically rewound. Made by **Printing Industries Equipment, Inc.**, 137 W. Twentieth St., New York 11, N. Y.

▲ For more details circle NED-661 K4 on enclosed inquiry slip ▲

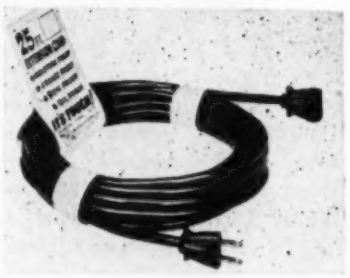
HEAT LIMIT CONTROLLER shuts off fuel, sounds alarm



Insurance against human or instrument failures which may permit overshooting of critical temperatures is provided by the 700 series Limitrol. It will automatically shut off fuel supply at any specified temperature manually set on the indicating scale and, if so desired, will sound an alarm. The electronic limit controller shuts off fuel input to a process in case of thermocouple failure or broken thermocouple connections. Components are housed in a two-compartment die cast case designed for surface or flush mounting. Made by **Barber-Colman Co.**, Wheelco Instruments Div., 1514 Rock St., Rockford, Ill.

▲ For more details circle NED-662 K4 on enclosed inquiry slip ▲

PLASTIC CORD SETS offered in 12 to 100-ft lengths



Abrasion, brine, oil, grease, weather, acid and alkali resistant plastic jacket extruded over the wire in these plastic cord sets has a 30° C low temperature brittle point and a 60° C maximum practical temperature limit point. Temperature range can be extended by change of plastic. Conductors have glass fiber and paper fillers covered with cotton serving. Grip plug, cord connector and other optional wiring devices are molded on. Red, gray and black are standard colors. UL-approved cord sets are made in 12, 25, 50, 75 and 100-ft lengths. Custom sets, spools and reels of wire are also available. Made by **Miller Electric Co.**, 32 River St., Pawtucket, R. I.

▲ For more details circle NED-663 K4 on enclosed inquiry slip ▲

. . a telephone booth that

Cuts outside noise 50%

the Hear Here ACOUSTI-BOOTH $100

Try it! . . you risk only shipping charges

Order an Acousti-Booth today . . if you're not completely satisfied, return it for a *full refund*. You pay only the shipping charges.

The walls of thick, sound absorbing material make telephoning like talking from a private office. And this Acousti-Booth takes less room than a large wall calendar. Attractive gray, hammered finish steel exterior.

$100 F.O.B. Chicago, Model 45. If you want light fixture, add $9.

Ask for Bulletin A-131

ACOUSTI-BOOTHS
Burgess-Manning Company, Architectural Products Div.
5970 Northwest Highway, Chicago 31, Ill.

▲ For more details circle NED-664 K4 on enclosed inquiry slip ▲

KEYNOTES

"See what I mean about KEY-TITE joints breaking easy?"

The perfect sealer for pipes carrying water, gas, low-pressure steam.

Write for free sample today!

SEALS TIGHT... BREAKS RIGHT!
A Product of KEY COMPANY
2601 McCasland • East St. Louis, Illinois

▲ For more details circle NED-665 K4 on enclosed inquiry slip ▲

Severance CARBO-MILLS GROUND-from-the-Solid

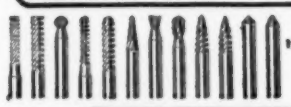
The all-purpose CARBIDE mill at LOW cost. Use them same as you would High Speed mills or Rotary Files—Same machines—Same speeds (or higher). No more, time consuming, "kid-glove" care. Just chuck them up in your regular equipment and watch these RUGGED CARBO-MILLS go to work!

SOLID CARBIDE CUTTING HEADS

CARBO-MILLS ASK NO SPECIAL FAVORS

3/32" SHANKS
7 Standard Numbers, featuring REAL cutting teeth to remove stock faster over long periods of use—as well after regrinding as when new.

CARBO-MILLS by the ORIGINATOR of Ground-from-the-Solid Mills



1/8" SHANKS
12 STANDARD NUMBERS
THE POPULAR WORK BENCH SET

NO PROBLEM OF TOOTH CHIPPING OR BRAZE-FAILURE

CARBO-MILLS PREFERRED BY OPERATORS!

1/4" SHANKS
20 Standard Numbers (only 9 illustrated) cover the widest possible range of uses. Don't continue losing valuable time and money; replace your less efficient Rotary Files with these longer lasting, faster cutting, stamina possessing, CARBO-MILLS at the earliest possible moment!

20 STANDARD NUMBERS

LAST UP TO 75 TIMES LONGER THAN ROTARY FILES OF HIGH SPEED

REGRINDING—Due to CARBO-MILLS being made of Solid Carbide repeated savings are made possible through successive regrinds.

INVESTIGATE NOW!

FOR COMPLETE INFORMATION AND PRICES SEND FOR BULLETIN CM.

DIE MAKERS! ASK FOR THIS SET

Furnished to you in a sturdy wooden case; Di-car Set No. 40 is a set of 8, ¼" shank CARBIDE mills designed and instituted specifically for you, the Tool and Die Maker. Specially selected shapes—Special tooth patterns and cuts for all types of precision Tool and Die work. You will ply your skills easier and faster than ever before with these personal finishing mills. These CARBIDE mills need absolutely no coddling and will win their way to the the most favored spot on your Work-Bench! Send for complete information and prices today! Ask for Leaflet No. 645

• • • GROUND-from-the-Solid • • •

SEVERANCE TOOL INDUSTRIES, INC.
761 Iowa Ave.
Saginaw, Michigan

▲ For more details circle NED-666 K4 on enclosed inquiry slip ▲

CHROMALOX ALL-METAL *Electric* RADIANT HEATERS

The new and improved CHROMALOX heating principle gives ALL infrared heat advantages: high heat intensity, "color blind" infrared radiation, heat that's infinitely variable! You get more satisfactory results at reduced costs in baking, drying, curing, preheating and similar uses with CHROMALOX Radiant Heaters.

Write for FULL DATA

Tell us what you want to do with infrared heat and we'll send you data sheets covering your needs.

IB-23

Radiant Heater Div., EDWIN L. WIEGAND CO. 7509 Thomas Blvd., Pittsburgh 8, Pa.

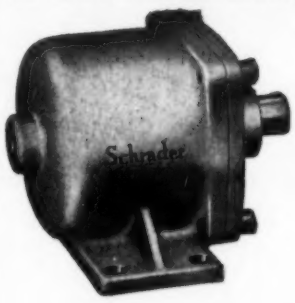
See other ad on Pg. 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle NED-667 K4 on enclosed inquiry slip ▲

Simplify any work holding operations with ClampAirs



Whether you want a bulldog grip or a gentle one, you'll find the answer in Schrader ClampAir cylinders. ClampAirs eliminate time-consuming hand clamping and rejects caused by an improper holding force.

Write for more information on how the versatile ClampAir can be used in your plant. Full line catalog gives all the data on Schrader ClampAirs as well as other numerous Schrader Air Control Products.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Avenue, Dept. E-38 Brooklyn 38, N. Y.

▲ For more details circle NED-668 K4 on enclosed inquiry slip ▲

dependable

McGILL® LAMP GUARDS outlast all others

McGill 7000 SR with rubber handle, reflector and Levolier Switch

McGill 7000 Series Lamp Guards are built to withstand the hard wear and abuse of heavy industrial use. Proven to last many times longer than ordinary lamp guards. The handle is durable rubber and the cage has extra-heavy steel wires, electrically welded for strength — zinc plated chromate finish. Available in many other models — also with 18-28 JT thermoplastic cord and plug.

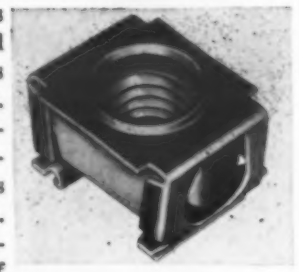
Send for McGill Catalog No. 49-A

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO INDIANA

▲ For more details circle NED-669 K4 on enclosed inquiry slip ▲

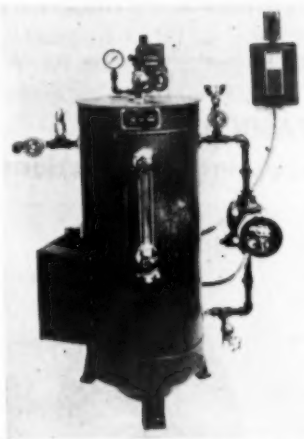
SELF-ANCHORING NUT
is easily installed in panel holes



A simple hand tool locks the self-anchoring Speed Grip fastener in panel holes ready to receive the screw. T-shaped fastener is preassembled in spring steel retaining cage which prevents rotation after installation. Fastener is designed to withstand large amounts of torque, and is suitable for applications where such handling techniques as stacking and butting are used. It can be attached after finishing processes, eliminating retapping or masking operations. Made by **Tinnerman Products, Inc.,** Dept. 14, P. O. Box 6688, Cleveland 1, O.

▲ For more details circle NED-670 K4 on enclosed inquiry slip ▲

STEAM GENERATOR
portable unit oprates automatically



Pressures up to 100 psi are produced by the Hot Shot steam generator which operates on 220-v ac, single or three phase. Full steam pressure is developed in about 20 minutes. Unit delivers moderate amounts of steam and is built to ASME and UL specifications. It is of welded steel construction, with rock wool heat insulation. Generator is built to user's requirements, equipped with safety valve, steam pressure gage, pressure regulator, water gage, control switch and magnetic contactor. Made by **Automatic Steam Products Corp.,** Dept. H, 140 W. 31st St., New York 1, N. Y.

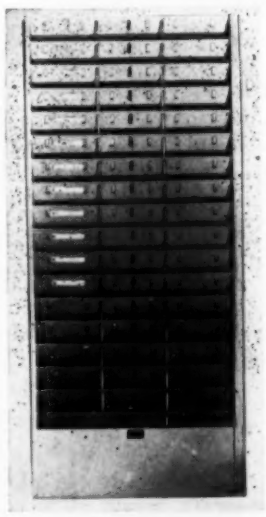
▲ For more details circle NED-671 K4 on enclosed inquiry slip ▲

HOLE GAGE KIT
for 3 to 12-in. diameter bores

Any size hole between 3 to 12 in. diameter can be accurately inspected for size, taper and out-of-roundness with the Adjustable Airebore gage kit. Gage consists of triangularly shaped spindle body to which are mounted a Plunjet gaging cartridge and such interchangeable components as a centering foot, handle connector, length extension and adjustment screw. Cartridge, connected to column type Precisionaire, provides 1000:1 amplification. Gage, which is set to diameter with gage blocks and a 0-12-in. calibrator, is self-centering and needs only to be rocked to ascertain true diameter of bore. Components for other size ranges are available. Made by **Sheffield Corp.,** 721 Springfield St., Dayton 1, O.

▲ For more details circle NED-672 K4 on enclosed inquiry slip ▲

JOB TICKET RACK
up to 54 compartments possible



By inserting divider rods through punched holes, this No. 18-JTR rack, which normally holds 18 job tickets, can be divided into 36 six-inch or 54 four-inch compartments for time cards or small literature. Compartments are 4½ in. deep. Four, six or eight of these racks can be mounted on a revolving stand to make a unit with as many as 432 pockets, each equipped with individual label holders. Each rack contains labels numbered from 1 to 54. Dimensions are 30 x 13½ x 2 in. Made by **Lit-Ning Products Co.,** Dept. A, P. O. Box 3370, Fresno 25, Calif.

▲ For more details circle NED-673 K4 on enclosed inquiry slip ▲

Harry Alter's DEPENDABOOK No. 161

REFRIGERATION PARTS AND SUPPLIES

plus Electric-Motor Parts, Air Conditioning and Heating

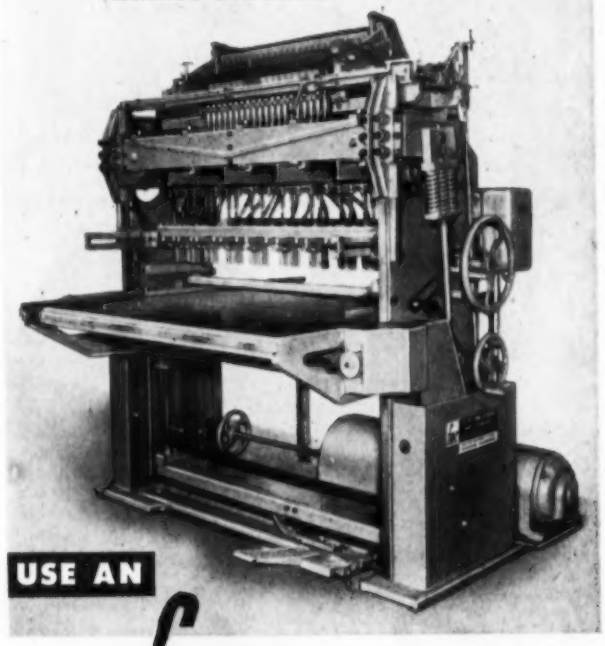
There are over 10,000 items illustrated, described and rock-bottom priced in our newest DEPENDABOOK. So — get and use this money-saver. Write for your copy to

The HARRY ALTER CO., Inc.
1728 S. Michigan Ave., Chicago 16, Ill.
134 Lafayette St., New York 13 N. Y.

Wholesale Only *"Harry Alter gives you snappy service"*

▲ For more details circle NED-674 K4 on enclosed inquiry slip ▲

IF YOU EMPLOY CARPENTERS AND USE NAILS — YOU CAN PROBABLY DO IT FASTER, BETTER, CHEAPER WITH A NAILING MACHINE . . .



USE AN *fmc* ALL PURPOSE INDUSTRIAL NAILER

THIS MECHANICAL NAILING MACHINE HANDLES EVERY PRODUCTION ITEM FROM BED FRAMES TO PALLETS AND GRAIN DOORS

You can cut nailing costs with mass production techniques. Modern nailing machine design eliminates the need for large production runs. Versatile operation permits even a small run to be handled with pay-for-itself economy. We can adapt a nailing machine to suit your product.

A TIME-SAVING DEVICE THAT WILL PAY DIVIDENDS THRU GREATER PRODUCTION

Driving multiple nails per stroke in a variety of nailing patterns outclasses any hammer-in-hand production. Uniform quality eliminates rejects — increases output.

HOW THE MACHINE IS MADE

Welded steel construction provides lasting hard use. Year after year performance with minimum maintenance.

SIZES AVAILABLE

Standard models select and drive up to 24 nails per stroke. Available in 48", 66" or 80" widths. Special custom adaptations are available on order.

HERE'S WHERE IT IS NOW APPLIED

Successfully adapted to nail pallets, shipping crates, redwood outdoor lawn furniture, cooling tower panels, bed spring frames, grain doors and many other wood products.

Available FROM *fmc* FOOD MACHINERY AND CHEMICAL CORPORATION

TRADE MARK NW753

FOOD MACHINERY AND CHEMICAL CORPORATION

PACKING EQUIPMENT DIVISION, RIVERSIDE, CALIFORNIA

WRITE FOR FREE LITERATURE!

▲ For more details circle NED-675 K4 on enclosed inquiry slip ▲

1 man handles Sheet Steel Faster, Easier with a C-F LIFTER

C-F Lifters, under one man operation, pick up, carry and unload more sheet steel tonnage per hour than any other method – and at lower cost per ton. Wide carrying angles hold sheets securely – won't damage high grade sheets; tong action insures safe carrying; fast opening and closing adjustments of Lifter jaws permit shifting from one size pack to another in seconds. C-F Lifters are made in standard or semi-special models to handle from 2 to 60 tons.

Write for Bulletin SL-28 for specific examples of C-F Lifter operation and economy.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle NED-676 K4 on enclosed inquiry slip

If *yours* is to be a *Superior* machine

It deserves *the best* variable speed drive

GET *Graham* *variable speed drive*

- **ULTIMATE in SIMPLICITY and COMPACTNESS**—only the Graham is a straight line extension of a standard induction motor—or available without motor.
- **UNLIMITED SPEED RANGE**—from any desired maximum speed to zero, including reverse if wanted without stopping motor.
- **UNMATCHED ACCURACY**—of speed setting and resetting and speed holding.
- **NO PERISHABLE PARTS**—such as belts or tubes, requiring periodic replacement.
- **PROVED PERFORMANCE**—Fifteen years satisfactory use as standard equipment.
- **LOW COST**—a better job for less money.

Prompt Delivery on Standard Models

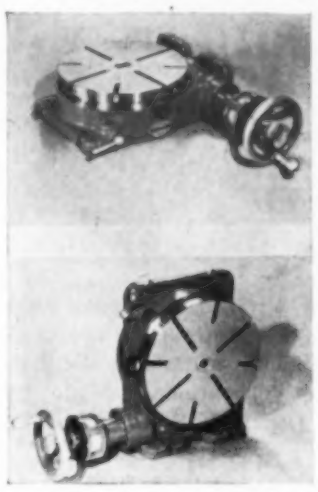
GRAHAM TRANSMISSIONS, INC.
Dept. NED, Menomonee Falls, Wis.

GET *Graham* *most reliable variable speed drive made*

Because engineered and rated for continuous round the clock service

For more details circle NED-677 K4 on enclosed inquiry slip

ROTARY MACHINE TABLE for precise angular spacing



Accuracy of ±6 seconds throughout entire 360 degrees is feature of model 2 rotary 11-in. table. Precise angular spacing can be done in either horizontal or vertical position on jig borers and grinders. Steel table top runs parallel with base within less than 0.0001-in. Conical surface below T-slots is graduated in degrees as an easy-to-read reference scale. Fine setting is read to 5 seconds on chrome-plated dial and vernier. Table is supplied with calibration chart, index attachment assembly, lifting handle and mahogany storage box. For compound angle settings a sine plate companion unit is available. Made by **Moore Special Tool Co.**, 721 Union Ave., Bridgeport 7, Conn.

For more details circle NED-678 K4 on enclosed inquiry slip

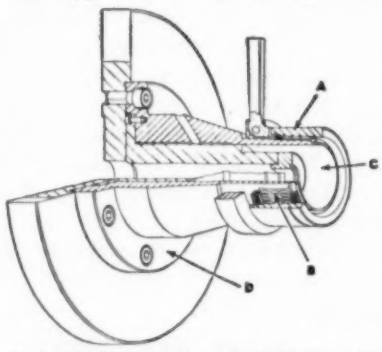
EXPLOSIONPROOF TANK LIGHT for chemical processing applications

Processing of flammable chemicals is aided by type EV 2375 explosionproof pendant tank light. When equipped with type R 75-w, 120-v spot lamp and suspended over tank porthole, fixture illuminates surface of mixture inside for observation by operator. Machined from aluminum, joints of the fixture are threaded and flame-tight. Top joint is gasketed. The heavy glass lens is heat and impact resistant, while the lamp receptacle will absorb severe shocks without damage. In chemical processing, unit qualifies for Class I, Groups C and D hazardous locations. When installed in horizontal or vertical base up position, it is suitable for Class II, Groups E, F and G locations. Made by **Crouse-Hinds Co.**, 7 North St., Syracuse, N. Y.

For more details circle NED-679 K4 on enclosed inquiry slip

CHUCKING FIXTURES capacities range from ½ to 4 in.

Flange-type Roll-Lock chucking tools are now available in 13 sizes, with chucking diameters ranging from ½ to 4 in. and maximum torque ratings from 37 to 2460 ft lb. They are adaptable to work or tool holding in hobbing machines, lathes, gear shapers, grinders and other machines and can be mounted to give less than 0.0001-in. runout. Hobbing fixture illustrated compresses with equal force all around the chucking surface, to give accurate pitch-line concentricity of the cut gear. By turning actuating ring (A) in opposite direction to angle of rollers (B), retained in cage between chuck body (C) and actuating ring, outer ring is forced toward the chuck flange (D). This compresses chuck body evenly and powerfully against work. Made by **Scully-Jones & Co.**, 1952 S. Rockwell St., Chicago 8, Ill.



For more details circle NED-680 K4 on enclosed inquiry slip

Dust Collectors

Newcomb-Detroit Co.—Junior and Senior models of Uni-Wash dust collectors described in 24-page illustrated bulletin D-53-30 collect and transform dust into wet sludge. Direct driven and V-belt units are detailed, and automatic sludge conveyor and automatic water level control features are covered. Floor, conveyorized and down-draft bench type collectors and shake-out booths for foundries are described.

For more details circle NED-681 K4 on enclosed inquiry slip

How ALUNDUM grain adds the "TOUCH of GOLD" to your polishing*

Norton ALUNDUM abrasive grain is extremely hard, tough and sharp. It is uniform in chemical composition, crystal structure and grain size. Its high capillarity means easier wetting with the glue and assures stronger, faster cutting, longer lasting wheel heads.

And you can get ALUNDUM grain in exactly the grain shapes and surface treatments you need to add the product-improving, money-saving "Touch of Gold" to every polishing job.

For helpful information on every factor in the setting up process—including the preparation of glue, drying operations, wheel types, polishing different metals, etc. — get the Norton booklet *Setting Up Metal Polishing Wheels and Belts* from your Norton Distributor. Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Massachusetts.

Making better products. . . to make other products better

NORTON *and its BEHR-MANNING division*

NORTON: Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING: Coated Abrasives • Sharpening Stones • Pressure Sensitive Tapes

*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

For more details circle NED-682 K4 on enclosed inquiry slip

practical answer to the increasing importance of production line marking!

The INDUSTRIAL AUTO-PRINTER

Use the Industrial Auto-Printer to print your bags and containers as you need them – to speed up your production and simplify your marking problems.

Completely eliminating expensive hand stencilling, the Auto-Printer has more than met requirements for imprinting, coding, dating, addressing and other marking. Adaptable to almost any size or type of container, it prints at up to 2000 impressions per hour – legibly and accurately.

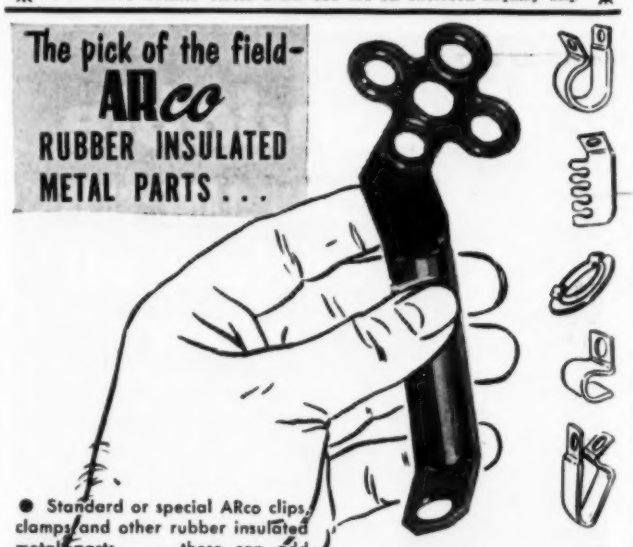
In hundreds of plants, Auto-Printers are setting appreciable records for saving marking time and labor where efficiency, accuracy and speed are demanded.

We are also prepared to design, develop, engineer and manufacture . . . to the highest standards of excellence . . . units to meet your special needs in marking and coding equipment. Full information and recommendations for your requirements will be sent on request. *Write for catalog. Dept. NED.*

Industrial Marking Equipment COMPANY, INC.
454 Baltic Street, Brooklyn 17, New York • MAin 4-2601

For more details circle NED-683 K4 on enclosed inquiry slip

The pick of the field- ARco RUBBER INSULATED METAL PARTS . . .



- Standard or special ARco clips, clamps and other rubber insulated metal parts . . . these can add electrical and sound insulation; corrosion and abrasion resistance to cable, loom, tube, wire, rod and pipe products.

You can improve the utility and durability of your product by requesting expert ARco engineering counsel; sample rubber insulations on your standard parts, and quantity estimates. These ARco services are yours without obligation.

Valuable literature available—Write today!

AUTOMOTIVE RUBBER COMPANY • INC.
Manufacturers • Designers • Engineers
12586 BEECH RD. • DETROIT 39, MICH.

ARco RUBBER PROCESSORS
4033 Homestead Rd. • Houston, Texas

ANYTHING CAN BE COVERED WITH RUBBER BY . . . ARco

For more details circle NED-684 K4 on enclosed inquiry slip

WIRE MESH

Jelliff

Specializing in the non-ferrous metals in counts to 200 x 200 or 50 x 750 and widths up to 48" in all commercial weaves

IN MESH WITH INDUSTRY

Since 1880

address your enquiries to Department 11

The C. O. JELLIFF MFG. CORP.
SOUTHPORT • CONNECTICUT • USA

WIRE PRODUCTS Jelliff SINCE - 1880

▲ For more details circle NED-685 K4 on enclosed inquiry slip ▲

Evans King-Size 10-ft. Steel Tape

STANDS UP STRAIGHT for UPRIGHT MEASUREMENTS

Those long upright measurements are easy and accurate with this new EVANS King-Size 10-ft. White-Tape. The 33% wider blade (full ¾") stays straight up without bending or buckling. You get a *free* belt clip and Tenite utility case with every tape. Sliding end hook for inside or outside measuring and . . .

it's marked so you don't have to figure! no other tape is marked this Evans way.

This Edge—marked in feet and inches with foot markings at every inch.

This Edge—marked in inches from 1" to 120"

Whichever way you work, in inches or feet and inches, you read *instantly* without having to stop and figure.

The EVANS King-Size White-Tape Is the Top 10-ft. Tape value at only $2.39. Purchase from your supplier.

another EVANS value—

THE ONLY 12-FOOT POCKET WHITE-TAPE

"Standard blade ½" wide"

This L-O-N-G-E-R Pocket White-Tape only $1.89

Purchase from your supplier.

Now, a pocket steel tape that measures a full 12 feet—eliminates the inconvenience and inaccuracy of adding two measurements as you do with shorter tapes. Exclusive EVANS double markings (same as King-Size above). Chrome plated case is *no bigger than cases for shorter tapes.* Self-adjusting sliding hook for 100% accurate inside or outside measurements. Each tape packed in FREE transparent Tenite utility case. **Free Sample Tape Available if your distributor does not carry these EVANS Tapes, have your purchasing agent write direct to the factory giving the name of his distributor and requesting a free sample tape. Specify whether 12 ft. L-O-N-G or King Size Tape is wanted.**

Evans & CO.

400 Trumbull Street, Elizabeth, N. J., U. S. A.

Makers of Evans "Long Tapes"—25-50-75-100 ft. and Evans 6-ft. Folding Rules

▲ For more details circle NED-686 K4 on enclosed inquiry slip ▲

TRANSPARENT PLASTIC ENVELOPE
protects drawings and work records

This Pacific - Vinyl transparent plastic envelope has electronically sealed seams. It is resistant to tears, scratches and wrinkles and will not become brittle. Sizes are available for protecting blueprints, shop cards, work charts, instruction sheets and photos. Free test sample is offered by **Pacific Plastic Products,** Dept. NP, 6402 Crenshaw Bldg., Los Angeles 43, Calif.

▲ For more details circle NED-687 K4 on enclosed inquiry slip ▲

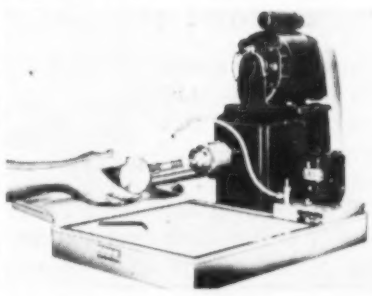
PLANIMETER
measures large areas at one time

Areas up to 32 in. wide and of unlimited length can be measured by the model 1100 planimeter without dividing and integrating separately. It has a 180-

degree measuring range and smallest vernier reading is 0.1-sq in. Large roller and vernier graduations facilitate reading. Optical tracer point with a 60-degree cone of vision makes tracing easy and eliminates errors due to parallax. Planimeter length is 18 in. and optional pole arm is 18 in. long. A control test disk is supplied for checking of accuracy. Made by **Los Angeles Scientific Instrument Co.,** Dept. NED, 2451 Riverside Dr., Los Angeles 39, Calif.

▲ For more details circle NED-688 K4 on enclosed inquiry slip ▲

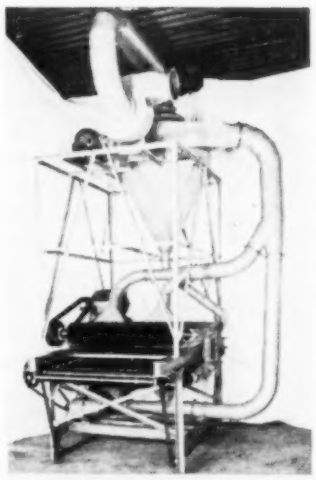
HONE & REAMER DRIVE
features three-speed transmission



Changes from any of three speeds or to two neutral positions can be made without shutting off the motor of the improved H D-100 hone and reamer drive. Portable bench type unit can be used with reamers, hones, lapping bars, drills, countersinks and other tools. All operating mechanisms run in an oil bath. Speeds are 80, 240 and 420 rpm. Unit has a 3/32 to ¾-in. capacity Jacobs chuck, ¼-hp motor with V-belt drive and can be equipped with a portable coolant system with its own centrifugal pump and motor. Made by **Reasor Mfg. Co.,** Thirteenth & Indiana Ave., St. Charles, Ill.

▲ For more details circle NED-689 K4 on enclosed inquiry slip ▲

SLAB BRUSHING MACHINE
handles materials up to 12 in. thick

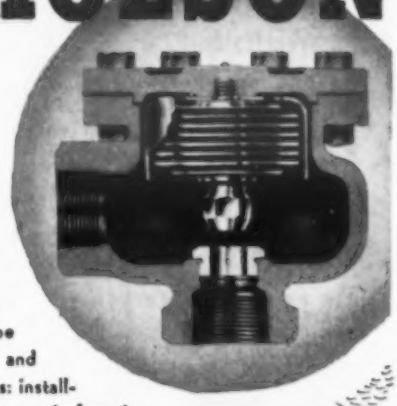


Slab brushing machine speedily cleans or removes scale from slab materials up to 12 in. thick and 58 in. wide. Unit, which is also available to handle other sizes of material, is particularly well suited to working with aluminum and other soft metals. Two cantilever arms give uniform pressure and uniform removal of scale or dirt. Brushes are adjustable for slab thickness and to compensate for wear. Dust collection system efficiently gathers wastes for disposal. Made by **Ten-Tex Corp.,** Dept. N, 1207-09 E. 23rd St., Chattanooga 8, Tenn.

▲ For more details circle NED-690 K4 on enclosed inquiry slip ▲

NICHOLSON

TRAPS for Every Plant Application



Send for Nicholson Catalog 953. This 32-page standard reference on advance-type trapping of steam, air and other mediums contains: installation diagrams, charts and formulae for determining proper trap sizes, and advice on solving specific problems. See why leading plants are increasingly standardizing on Nicholson traps for increased production and minimum maintenance.

Send for Helpful Booklet

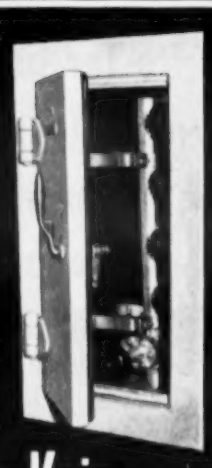
W. H. NICHOLSON & CO.

TRAPS · VALVES · FLOATS

162 Oregon St., Wilkes-Barre, Pa.

▲ For more details circle NED-691 K4 on enclosed inquiry slip ▲

Weathertight
Watertight
Insulated
Flush-Mounted
ACCESS DOORS
by
Overbeke-Kain



3020-OK

Complete protection for equipment is assured by OVERBEKE-KAIN Access Doors. Special neoprene rubber gasketing provides positive seal . . . articulated hinge permits complete dogging on hinge side. Standard construction is heavy-gauge steel plate . . . stainless steel, aluminum or other non-corrosive materials available also. Doors can be furnished in sizes to meet all needs.

the Overbeke-Kain company

Write for Bulletin No. 784 for complete information.

MARINE PRODUCTS DIVISION
20979 Aurora Rd. • Bedford, Ohio

▲ For more details circle NED-692 K4 on enclosed inquiry slip ▲

Enjoy THE ADVANTAGES OF HAVING TIME RECORDED

ACCURATELY
AUTOMATICALLY
EFFICIENTLY

THE NEW *Simplex* TIME RECORDER

This new Simplex Time Recorder figures payrolls easier, 50% faster—cuts payroll costs in half.

Vertical or horizontal print . . . Two color registration . . . Trigger-touch print . . . Direct subtraction . . . One-minute positioning . . . Attractive, indestructible case.

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N-108
Please give us more information on:

☐ Cost Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks

Firm.....
Name.....
Street & No.....
City..... State.....

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It's practically
WATER-WHITE
a NEW
chemically resistant
baking finish—
DURACHEM

For all types of metal products from heavy hardware to fine jewelry

A new baking type synthetic finish—DURACHEM—combines unusual clarity with a high degree of chemical resistance. Almost water-white—remains clear after exposure to heat and sunlight—resists salt spray and perspiration. Available in colors too.

Samples and technical literature on request

OUR 78th YEAR — PIONEERS M&WC 1876 IN PROTECTION
MAAS & WALDSTEIN CO. 2116 McCARTER HIGHWAY NEWARK 4, NEW JERSEY
Midwest Div., 1658 Carroll Ave., Chicago 12, Ill.
Pacific Coast Div., Smith Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.
MANUFACTURERS OF INDUSTRIAL FINISHES

▲ For more details circle **NED-694 K4** on enclosed inquiry slip ▲

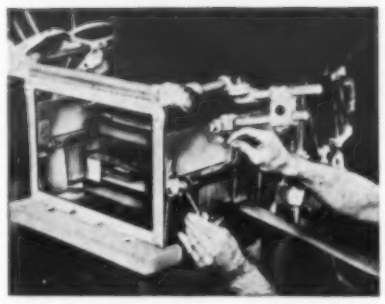
Write for bulletins on this rugged money-saving materials-handling equipment

Phillips equipment has proved its merit in thousands of applications everywhere. Ruggedly built and well designed, it withstands hard usage for longer periods. You'll profit by having Phillips literature on file.

Phillips
CORPORATION
(formerly Phillips Mine & Mill Supply Co.)
Manufacturers Since 1863
16 Arch Street, Carnegie, Pa.

▲ For more details circle **NED-695 K4** on enclosed inquiry slip ▲

SAFETY DIE ENCLOSURE for punch press, is air controlled

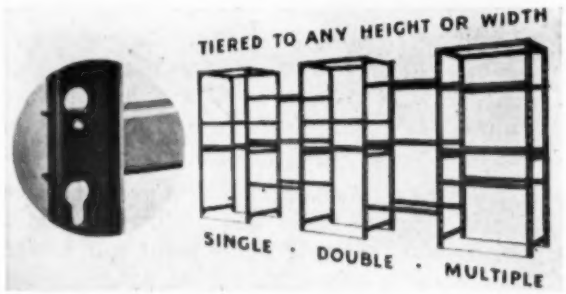


Punch presses limited to primary operations can make use of this Allsafe die enclosure which is air - controlled. Transparent ⅛-in. Lucite window allows unobstructed view of die space and protects operator's face and eyes from flying particles. Opening window automatically cuts off air supply to foot pedal valve and clutch cylinder, and while window is open, press cannot be tripped. Photo shows how adjustable finger side shields can be set to envelop stock and die clamps. One nut tightens or loosens all fingers in side shield. Made by **American Allsafe Co.**, 1242 Niagara St., Buffalo 13, N. Y.

▲ For more details circle **NED-696 K4** on enclosed inquiry slip ▲

ADJUSTABLE STORAGE RACKS for light or heavy materials

Simplicity in assembling or dismantling without bolting or welding is featured by these all-welded steel adjustable storage racks. Cross bars lock into slots



on uprights by means of male joiners at a minimum of 4 in. apart, making rack safe for storage of light or heavy materials in variety of dimensions and weights. Rack space is adjustable at any time to any height or width. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

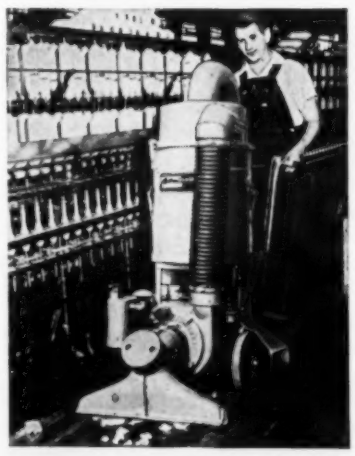
▲ For more details circle **NED-697 K4** on enclosed inquiry slip ▲

ADJUSTABLE THERMOSTAT operates at —100 to 300° F settings

Hermetically sealed, C8 series adjustable thermostat for electronic and aircraft application is suitable for direct control of heaters and temperature alarm or cut-off service. Units can be set to operate at any temperature from −100 to 300° F. Shocks up to 150 g and vibration of 25 g at up to 1000 cycles per second will not damage thermostat nor change its operating point. Encasing shell is temperature responsive element and houses contact structure and mechanism to multiply shell expansion. Contact rating is 5 amp at 115 v ac. Consistent control within ±3° F is feasible with moderate loads. Made by **G-V Controls Inc.**, 30 Hollywood Plaza, East Orange, N. J.

▲ For more details circle **NED-698 K4** on enclosed inquiry slip ▲

VACUUM CLEANER specially modeled for textile industry



Specially designed blower attachment on this Floormobile industrial vacuum cleaner (*NED — July* '53) permits efficient removal of fly and lint from under looms and spinning frames. Cleaning is done at operator's walking speed. Attachment blows exhaust air under machinery, forcing dirt into the open where it can be easily picked up by the large 22-in. suction nozzle on the return trip. Machine is powered by a fire-safeguarded gasoline engine. Made by **Handling Devices Co.**, Room 133, 43-45 Pearl St., Brookline 46, Mass.

▲ For more details circle **NED-699 K4** on enclosed inquiry slip ▲

Does jobs no drill can do...
Does many jobs *better!*

CC Clark "HOLE-MAKER"

Produces round, true holes in CASTINGS, FORGINGS, BOILER PLATE, THIN SHEET STOCK, PIPE, TUBING, ETC.; Drills CROWNED, CYLINDRICAL, FLAT OR WEDGED SURFACES!

No triangular shaped holes, no grabbing on break-throughs, no "walking" on starts with the Clark "HOLE-MAKER"! Produces full-gauge holes from start to finish. Removable pilot guides HOLE-MAKER straight and true even on intermittent cuts. Will also use pilot drill.

Ideal production tool on TURRET LATHES, CHUCKING MACHINES, RADIAL DRILLS, DRILL PRESSES, PORTABLE ELECTRIC and PNEUMATIC DRILLS. Excellent for rough boring, finishing and trepanning. Cuts all ferrous and non-ferrous metals and other materials. Saves money, replaces large drill inventory... Bores castings, forgings, etc. 3 to 10 times faster than single pointing!

5 ADJUSTABLE SIZES COVER I.D.'s from 1" to 6"
Specify straight shank or MT 2, 3, 4. Other tapers on order.

MODEL	CAPACITY
102	1"–2"
203	2"–3"
304	3"–4"
405	4"–5"
506	5"–6"

When ordering, specify material to be cut.

ROBERT H. CLARK COMPANY
9330 Santa Monica Blvd., Beverly Hills, Calif.

▲ For more details circle **NED-700 K4** on enclosed inquiry slip ▲

Solution to a Hot Solution Problem

Carpenter Stainless No. 20 Handles Hot Sulphuric Acid—Solves Corrosion Problem

In this spray booth, metal parts are cleaned by a solution of hot sulphuric acid. Booth is fabricated from Carpenter Stainless No. 20 pipe, tubing, sheet and plate for longer equipment life, reduced maintenance.

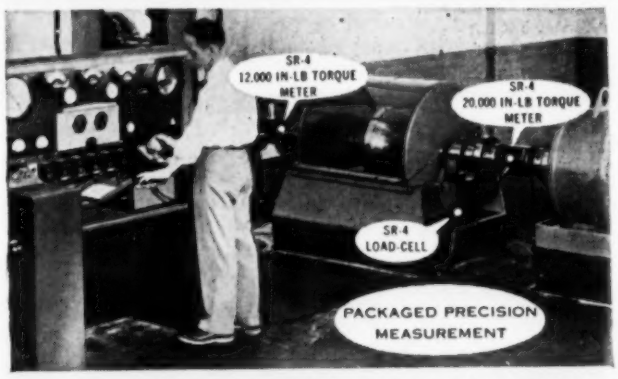
Highly resistant to concentrations or solutions of H_2SO_4 and unaffected by a long list of other highly corrosive acids, liquids, gases, Carpenter Stainless No. 20 cuts the cost of corrosion control. It has the ductility and general workability for trouble-free bending, machining, threading, welding and brazing.

Write for NEW Carpenter Stainless No. 20 bulletin containing data on physicals, corrosion resistance, fabrication.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, New Jersey

FOR INFORMATION on Carpenter Stainless No. 20 bars, strip, wire and billets, contact The Carpenter Steel Company, Reading, Pa.

▲ For more details circle **NED-701 K4** on enclosed inquiry slip ▲



NATIONAL SUPPLY MEASURES TORQUES AND THRUSTS ACCURATELY AND EASILY WITH SR-4® SYSTEM

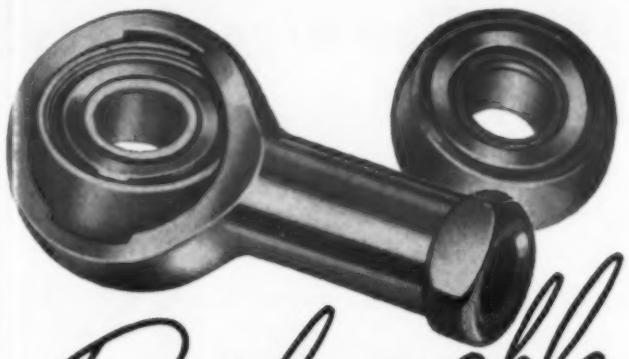
At their Toledo plant National Supply Company is using Baldwin SR-4 Torquemeters and Load Cells to measure torques and thrusts in development of torque converters. They report the torquemeters are both accurate and convenient in measuring the efficiency of their new converters. Calibrations of load cells resulted in satisfactory reports.

By using Baldwin's SR-4 Torque Measuring System, National Supply benefits in three ways: (1) *reliable accuracy* over wide torque range. (2) *convenience* from easy mounting. (3) *trouble-free operation* due to rugged construction and absence of moving parts.

You will profit, too, by using *Baldwin Packaged Precision Measurement*. Write now for our new booklets which will tell you how you can benefit by using SR-4 Device systems to measure electronically either load, torque or fluid pressure. Write to Dept. 3329, Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa.

BALDWIN-LIMA-HAMILTON
General Offices: Philadelphia 42, Pa. • Offices in Principal Cities
In Canada: Peacock Bros., Ltd., Montreal, Quebec

▲ For more details circle **NED-702 K4** on enclosed inquiry slip ▲



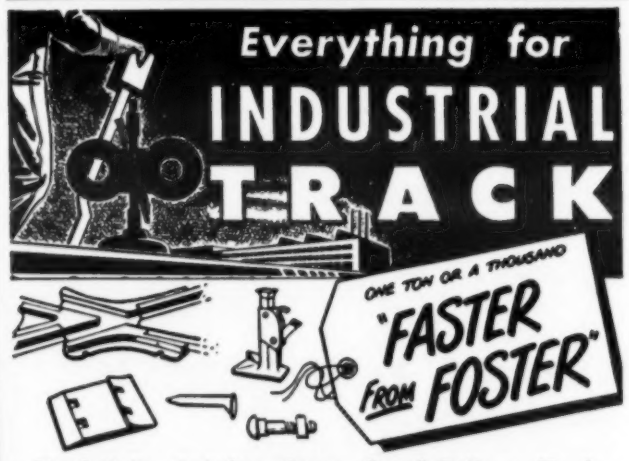
Replaceable
BALL BEARING
CONNECTING ROD ENDS

YOU get friction-free positive control with the new Avalon Ball Bearing Connecting Rod. Precision made for precision fit. Bearings rotate in either steel or aluminum housings and are replaceable. Rotation compensates for misalignment up to 20°.

Write Today for Details

AVALON MACHINE PRODUCTS, INC.
2535 EAST IMPERIAL HIGHWAY · LOS ANGELES 59, CALIF.

For more details circle NED-703 K4 on enclosed inquiry slip



Need Rails—Switches—Frogs—Guard Rails or Track Tools? For best selections and prompt deliveries—try FOSTER—shipments of most items can be made from stocks in our five nationwide warehouses.

RAILS—New and Relaying Foster stocks are being replenished daily. Any items we did not have last week, we'll probably have next week. We match specifications and sizes to meet all your requirements on any job, new installations or replacements. *Call on Foster for all your needs for Industrial Track Equipment and Supplies.*

Write for Track Equipment Bulletin NE-10

L. B. FOSTER CO.
CHICAGO 4, ILL. HOUSTON 2, TEX.
PITTSBURGH 30, PA. NEW YORK 7, N. Y.

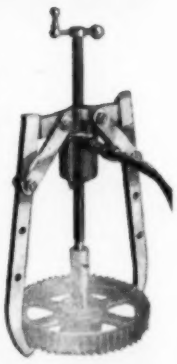
For more details circle NED-704 K4 on enclosed inquiry slip

ARMSTRONG-BRAY
HYDRAGRIP
HYDRAULIC PULLERS

Valuable Maintenance Tool

With the handy HYDRAGRIP and a few ARMSTRONG-BRAY Pullers, one can quickly, safely and easily remove gears, wheels, bearings, sheaves or parts from shafts, can re-install them with equal ease. Single centered ram assures aligned thrust that moves parts along shafts smoothly without wedging or binding. Saves time, saves parts—ends battering and breakage. The HYDRAGRIP—comes complete with handy, portable, hydraulic hand pump, high pressure connecting hose and 17½-ton capacity hydraulic jack with interchangeable heads.

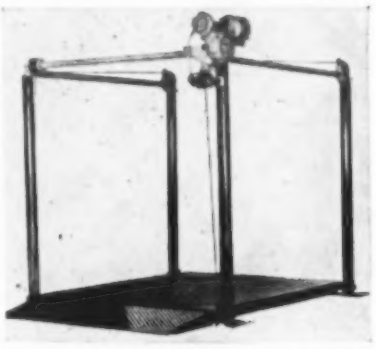
Write for Catalog Sheet—describes HYDRAGRIP and complete line of standard and special external and internal pullers.



ARMSTRONG-BRAY & CO.
5362 NORTHWEST HIGHWAY · CHICAGO 30, ILL.

For more details circle NED-705 K4 on enclosed inquiry slip

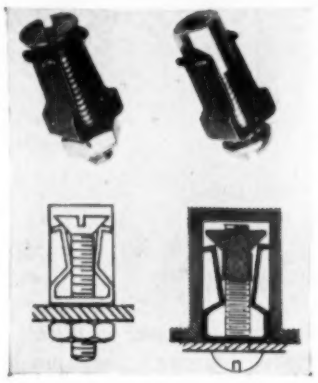
MATERIALS HOIST
8 x 6-ft platform lifts up to 6000 lb



Electrically - powered Electro-Loader hoist can be used on upper floors, in temporary locations, or out-of-doors without excavation or special foundation. Standard mounting is by three-bolt foot plate at each leg, but casters and other special arrangements are available to order. Three models are available, having 5000, 5500 and 6000-lb capacities. A wide range of platform sizes is available, and platform lifting stroke is 66 in. Drive is by 5/16-in. plow steel cable, with 6 fpm lifting speed. Safety devices include centrifugal governor brake, automatic top and bottom stops and slack cable shut off. Made by **Globe Hoist Co.**, Industrial Div., 1002 E. Mermaid Lane, Philadelphia 18, Pa.

For more details circle NED-706 K4 on enclosed inquiry slip

EXPANSION ANCHORS
for concrete, cinder block, etc.



Dual expansion anchors are available to fit standard round or flat head machine screws from ⅛ to ½-in. They are designed for attaching fixtures, pipe hangers or other objects to such materials as concrete, cinder block, plastics, glass, wood, hollow tile and metal. They are reusable and are rust and corrosion-resistant. Holding power in the ¼-in. size is 220 lb in suspension. Anchors are also shock and vibration resistant. They can be used at any depth of hole and can be made to hold at any desired point, even where hole has been drilled oversize. Made by **Wyem Products Co.**, Dept. N, 2292 S. Taylor Rd., Cleveland 18, O.

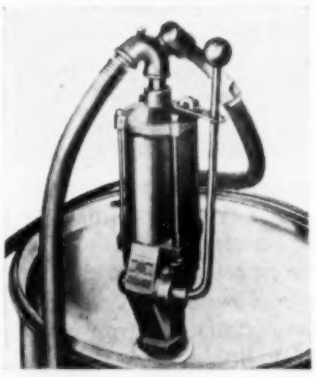
For more details circle NED-707 K4 on enclosed inquiry slip

TORQUE WRENCHES
measure right or left-hand torque

High-grade alloy steel torque wrenches are built to withstand rough usage without loss of accuracy. Permanent machine - cut calibrations are bright-buffed for easy reading. Two ⅜ and two ½-in. drive models comprise series. Former are of 0 to 150 and 0 to 600 lb-in. capacity, latter are for 0 to 100 and 0 to 200 lb-ft. Wrenches are available either individually or in a set of four with metal case. Made by **J. H. Williams & Co.**, Dept. NED-10, 400 Vulcan St., Buffalo 7, N. Y.

For more details circle NED-708 K4 on enclosed inquiry slip

HAND PUMP
is of continuous flow type



Having a capacity of 25 gal per 100 strokes, series 800 continuous-flow hand-operated pump handles practically all types of fluids. Mechanical shaft seal is combined with totally enclosed design to assure long life. Seal is added safety factor in handling inflammables and transferring petroleum products. Line includes types for use on drums, tanks and for underground storage installations. Made by **Opaco Co.**, 3540-A S. Wabash Ave., Chicago 16, Ill.

For more details circle NED-709 K4 on enclosed inquiry slip

54 pages on how to select and use abrasive discs for...

- Different materials and parts
- Various surface grinders
- Desired stock removal
- Desired finish
- Top production rates

GARDNER MACHINE COMPANY
460 Gardner St., Beloit, Wisconsin

121A

For more details circle NED-710 K4 on enclosed inquiry slip

Peerless ELECTRIC MOTORS

* Original Equipment Manufacturer

Built the way you'd build them yourself

If you had the facilities, you'd build your own motors, and you'd build them exactly the way you want them.

Well, that's exactly the way Peerless builds motors . . . With your design engineers, we start with the product and its functions . . . analyzing your needs as your engineers see them . . . adding our own knowledge of motor designs and applications. Together, we boil everything down to the one motor that will serve you best. Then, we match our production schedule to yours.

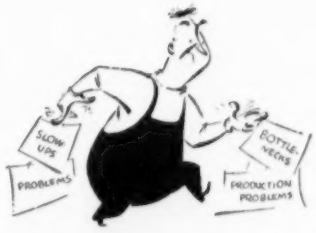
You'll want more information about having Peerless work on your motor problems. It's easy to get. Just pick up the phone and call—ask for me if you wish. You can have the motors you want—Peerless Gold Seal Motors—built the way you'd build them yourself.

Ralph Kimble
President

THE PEERLESS ELECTRIC CO. · WEST MARKET ST., WARREN, OHIO
MOTORS FANS BLOWERS

For more details circle NED-711 K4 on enclosed inquiry slip

Gummed Crepe Paper or lollypop wraps are no sticky problem for the BECK SHEET CUTTER



are you really stuck?

Charms and Dennison were . . . but both solved their sticky problems with Beck Automatic Roll Sheet Cutters . . . one cutting candy wrappers to close printed register . . . the other cutting gummed crepe paper.

In both cases, the Beck Automatic Roll Sheet Cutter does its work smoothly . . . economically . . . quickly. *And it can do that for you.* It reduced cutting costs and speeds up production. Its many attachments enable the Beck engineers to "tailor" it to your particular needs. For more information, write:

CHARLES BECK MACHINE CORPORATION
409 N. 13th Street Philadelphia 8, Pa.

For more details circle NED-712 K4 on enclosed inquiry slip

PORTABLE HARDNESS TESTERS

RIEHLE portables test *inside and outside* surfaces of parts inaccessible or difficult to test on bench machines. Riehle testers weigh but a few pounds and come in handy carrying cases. They save the expense and time of cutting samples from heavy parts. Testers simply clamp onto specimens.

Riehle Portable Hardness Testers eliminate "conversion" errors by using standard Rockwell indentor and loadings. Scales: A, B, C, D, F and G. Capacities: up to 12" diameter or thickness.

RIEHLE TESTING MACHINES
Division of American Machine and Metals, Inc.
East Moline, Illinois

FREE BULLETIN WRITE DEPT. NED-1054

For more details circle NED-713 K4 on enclosed inquiry slip

Why does HERMAN NELSON outsell all other portable air heaters?

BECAUSE: Every Herman Nelson Heater gives *complete safety indoors*...with dangerous fumes vented outside—*maximum efficiency outdoors*...with flexible canvas ducts channeling heat right to the spot where you need it!

More than 30,000 Herman Nelson Portable Air Heaters are in use today. Whether you buy, rent or lease, you'll get the best deal if you see your Herman Nelson Distributor first!

AAF herman nelson

HERMAN NELSON
BEST KNOWN NAME IN
PORTABLE AIR HEATERS
DIVISION OF AMERICAN AIR FILTER COMPANY, INC.
DEPT. 11, MOLINE, ILLINOIS

Write for FREE Monthly Weather Forecasting Service
Better than 85% accurate during the past three years!

For more details circle NED-714 K4 on enclosed inquiry slip

MORE WORK using FEWER WORKERS with

DUO-FAST One-Hand AUTOMATIC TACKERS

You can do much more tacking in less time with these efficient Duo-Fast Tackers . . . You'll like the wide range of AIR TACKERS, GUN TACKERS and HAMMER TACKERS available. You get exactly the model you need . . . You'll like our money-saving FREE MAINTENANCE SERVICE. For the complete story, mail this coupon.

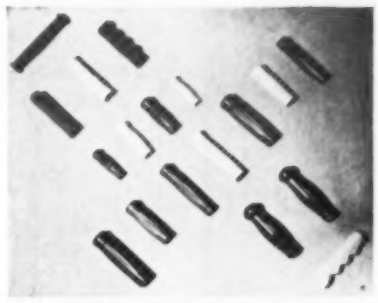
FASTENER CORP. 860 Fletcher St., Chicago 14, Ill.

FREE TELL US MORE about Duo-Fast Tackers for — _____ _____

Our Business is.....
Company Name.....
Address.....
City..... State.....

For more details circle NED-715 K4 on enclosed inquiry slip

PLASTIC HAND GRIPS resist corrosion and staining



Slightly smaller inside diameter than bar for which they are designed gives line of vinyl plastic hand grips a snug fit. Made in such colors as fire engine red, royal blue, yellow and green, handle grips are not faded by sunlight, salt and rain water, or stained by oil or gasoline. They are injection molded with finger grips, a series of long smooth curves or a row of rings to make gripping easier. Applications include outboard motors, bicycles, lawn mowers, farm and industrial equipment and toys. Made by **Hungerford Plastics Corp.,** Dept. IN35, 114 Beach St., Rockaway, N. J.

For more details circle NED-716 K4 on enclosed inquiry slip

COUNTER-TOTALIZER can be 100 ft from photohead

Many counting operations can be served by the Post model F-1 counter designed to operate continually at rate of 2 to 3 objects per second. During occasional sudden bursts, the F-1 will count up to 7 objects per second. Any Post photohead can be used and line voltages from 100 to 120 v will operate the totalizer. Unit can be located as far as 100 ft from photohead which can be placed in highly confined area. Standard model has 8-ft long cord from counter to photohead. Made by **Post Machinery Co.,** Electronic Products Div., Dept. N9, Beverly, Mass.

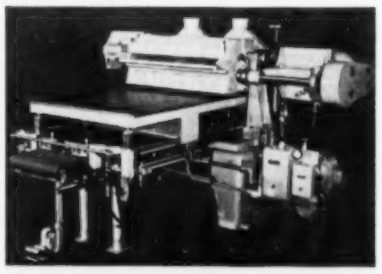
For more details circle NED-717 K4 on enclosed inquiry slip

ANGLE ARM STITCHER places stitches parallel to seam

Strength is given to any tubular package stitched with the model CAA-1244 angle arm stitcher which places wire stitches parallel to the seam. On telescoping bolt and nut boxes, for example, machine puts staples vertically in the box, preventing them from locking or binding in or against each other. Made by **Diagraph-Bradley Industries, Inc.,** AA Div., P. O. Box 269, Herrin, Ill.

For more details circle NED-718 K4 on enclosed inquiry slip

SURFACE FINISHING MACHINE for nonmagnetic trim and nameplates



Modified model 203-C surface finishing machine with vacuum chuck is designed for processing auto trim and appliance nameplates made from brass, copper, silver, plastic, aluminum, wood and other nonmagnetic materials. Added capacity comes from large 40 x 48-in. vacuum table, and new control circuits offer choice of either automatic or semiautomatic cycling. Side oscillation mechanism is now located at mid-table. For added safety, should vacuum drop below safe setting, roll automatically lifts from work and machine stops. Floating buff follows work curvature at uniform preset contact pressure. Made by **Clair Mfg. Co.,** 1003 S. Union St., Olean, N. Y.

For more details circle NED-719 K4 on enclosed inquiry slip

Stop Slamming Doors!

KANT-SLAM HYDRAULIC Door Check

Closes Stops

Large or Small Doors, Screen Doors and Gates Easily, Gently, Smoothly

Slamming . . . Banging . . . Broken Door Glass . . . Insects . . . Drafts . . . Heat Loss

$9.95

ATTRACTIVE, DARK BRONZE, METALLIC LACQUER FINISH HAMMERED BRONZE EFFECT

KANT-SLAM closes doors with efficiency of human hand. Hydraulic action—NOT an air check—piston works in oil. 3 years trouble-free service guaranteed. Price about half of other hydraulic controls.

Works any place along hinge side of door—top, middle or bottom—either right or left hand doors. KANT-SLAM is completely self-contained—door and hinges are absolutely free of any strain or pressure. Holds door open when past 90 degrees.

Only one size Check required—three sizes easily detachable springs available for various size doors. Simple screw adjustment for closing speed.

Order on 30 Days FREE TRIAL at $9.95 delivered—or Write for Complete Details.

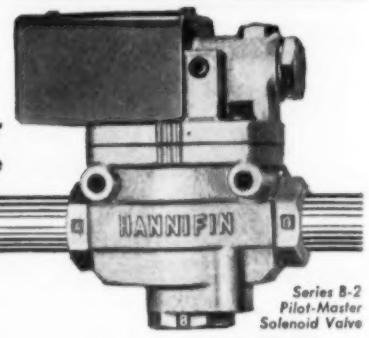
Used By Hundreds of Nationally-Known Firms

Oak Ridge Atomic Energy Plant, University of North Carolina, Great A. & P. Tea Co., Bethlehem Steel Co., General Electric Co., Rutgers University, Northern Aircraft, Fuller Brush Co., Carnation Co., Shell Oil Co., Kraft Foods.

KANT-SLAM DOOR CHECK CO.
474 W. Spring St., Bloomfield, Indiana

For more details circle NED-720 K4 on enclosed inquiry slip

Once a "P-M" Pilot-Master Air Control Valve is put in a line...it is never removed!



Series B-2 Pilot-Master Solenoid Valve

That's right: You use a pipe wrench only once...then never touch the piping again. To renew this valve you simply replace a cartridge that contains all the working parts. The valve body—a simple, sturdy housing—need never be removed from the line. Think of what this can mean to you in reduced down time and lower maintenance costs! Plan now to standardize on Hannifin Pilot-Master Valves.

- 2-way, 3-way and 4-way
- All sizes ¼" to 1¼"
- Pressures from 15 to 150 P.S.I.

WRITE FOR BULLETIN NO. 231

HANNIFIN
Hannifin Corporation, 527 South Wolf Road, Des Plaines, Ill.
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

For more details circle NED-721 K4 on enclosed inquiry slip

modernize materials handling with

CARGOTAINERS®

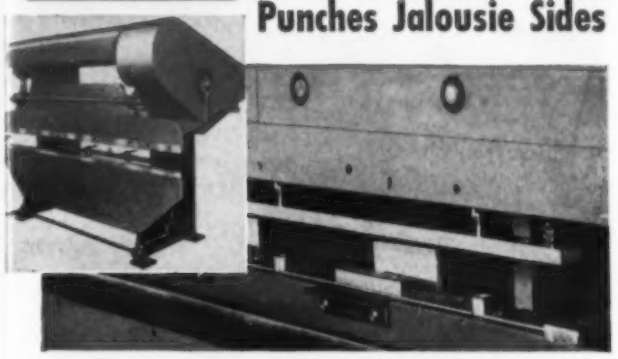
Cargotainers are designed to keep pace with modern methods of materials-handling because they are: 1. Sturdy and resistant to shock; 2. Readily folded when not in use; 3. Open mesh so that contents may easily be seen for quick inventory; 4. Efficiently designed for shipment, assembly line use, and vertical storage. Write for information concerning the new CLEARVIEW model with its exclusive foot construction for greater durability and better locking and stacking. Dept. NED, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.

Pittsburgh Steel Products Company
A Subsidiary of Pittsburgh Steel Company

For more details circle NED-722 K4 on enclosed inquiry slip

Airtherm

METALWORKER Power Press Brake Punches Jalousie Sides



Another Example of METALWORKER Versatility

At the Efco Corporation, Midwest jalousie manufacturer, an Airtherm METALWORKER Power Press Brake handles the multiple punching operation—just one example of the variety of jobs that can be done on an Airtherm METALWORKER.

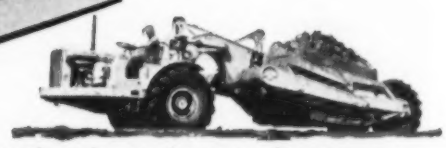
Machinery Division Airtherm MANUFACTURING COMPANY
716 South Spring Avenue • St. Louis 10, Missouri

Write for literature and the name of your nearest representative.

SERVING THE METALWORKING INDUSTRY SINCE 1931

▲ For more details circle NED-723 K4 on enclosed inquiry slip ▲

CATERPILLAR



FIRST in earthmoving equipment—chooses . . .

Research Laboratories, Peoria, Illinois

PUNCH-LOK

FIRST IN HOSE CLAMPS

Ask for Case Histories Booklet

☆ no snag
☆ everlasting
☆ fast
☆ no leak

Stocked by your near-by Punch-Lok distributor

"The Sign of a Good Hose Clamp"

PUNCH-LOK Company
Dept. A, 321 North Justine Street
Chicago 7, Illinois

5297

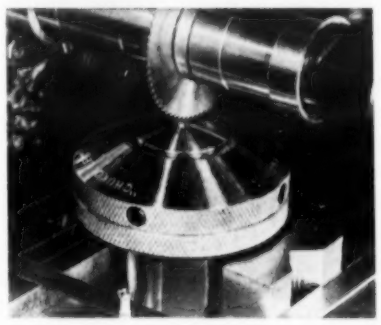
▲ For more details circle NED-724 K4 on enclosed inquiry slip ▲

POROUS RUBBER STAMP
makes 500 imprints with one inking

Porous rubber type-bands used in this NCR stamp absorb enough ink to make 400 to 500 impressions without reinking. Stamp is especially useful for shelf-marking and stamping items with wide range of prices. Figures can be changed by turning wheels attached to the bands which are chemically treated to prevent sticking or refusal to turn. Seven models include large- and small-letter two-band stamps with figures from 01 to 99; four-band stamps with figures from 1 to 9999, with or without parentheses around price marking; four-band models for date coding; and a five-band stamp for showing both price and tax. Made by **National Cash Register Co.**, S. Main St., Dayton 9, O.

▲ For more details circle NED-725 K4 on enclosed inquiry slip ▲

COLLET CHUCK
holds soft threaded, thin wall parts



Soft, threaded and thin walled cylindrical parts are held without damage during machining by this Chukollet collet chuck. Made of Nickel Moly steel and hardened inside and out, chuck is so constructed that it cannot dislocate workpiece since collet is not drawn in while closing. It has an adjustable internal stop which locates workpieces axially. Chuck can be used on lathes, mills, drill presses, dividing heads, super spacers, surface grinders, cylindrical grinders and up to 6-jaw chucks. It can also be set in vise at any angle, as illustrated. Made by **Hancock Mfg. Co.**, Dept. NED, Santa Clara, Calif.

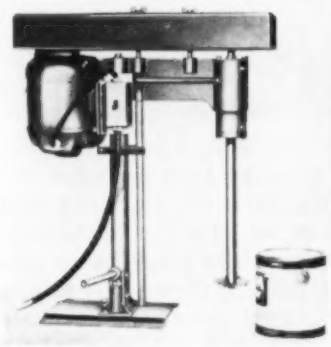
▲ For more details circle NED-726 K4 on enclosed inquiry slip ▲

PLASTIC PIPE
handles most common corrosives

Light in weight, odorless, tasteless and noncontaminating, Dur-Ace rigid plastic pipe has good resistance to impact and all inorganic acids and alkalis except for a few strong acids. Strength, rigidity and chemical resistance are maintained over temperature range from −40 to 170° F. Pipe is made in sizes from ½ to 2 in. in 20-ft lengths and in two wall thicknesses. Maximum working pressures at 70° F for heavy wall pipe range from 300 psi for ½-in. pipe to 150 psi for 2-in. pipe. Standard wall thickness pipe pressures are one-half those of heavy wall pipe. Threading is by standard pipe threading tools or machines. Pipe can be bent if heated first. Made by **American Hard Rubber Co.**, Dept. NED, 93 Worth St., New York 13, N. Y.

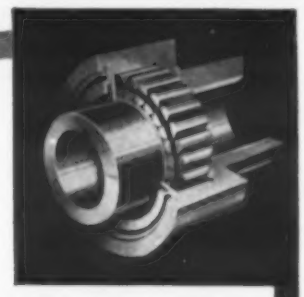
▲ For more details circle NED-727 K4 on enclosed inquiry slip ▲

LABORATORY MIXER
handles batches up to 5 gallons



Either 3, 3½ or 4-in. diameter impellers are available with model 1-VT laboratory mixer. Unit, which can also be used for small scale production, has a 1-hp motor and handles up to 5-gal batches. It is 30 in. high and has a hand-operated hydraulic lifting device that raises it to a maximum of 44 in. Mixer is most recent in line of Ultrafast high speed mixers and dissolvers. Made by **Cowles Co.**, 15 Trackside, Cayuga 1, N. Y.

▲ For more details circle NED-728 K4 on enclosed inquiry slip ▲



for

OVER-RUNNING, BACKSTOPPING, INDEXING:

WHY SPECIFY A CLUTCH WITH LESS THAN MAXIMUM TORQUE CAPACITY?

You're assured a full complement of torque capacity when you specify today's modern clutch design. The Formsprag Clutch, with a full complement of sprags, provides more capacity in less unit space than any other clutch. You're assured long life too: an infinite number of changing contact points prevents excessive wear. Design simplicity permits rebuilding—three times. For more facts, write for this 10-page folder of descriptive engineering data, on your letterhead please.

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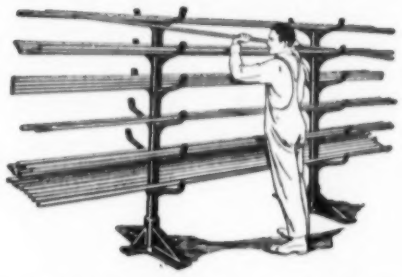
FORMSPRAG COMPANY
23595 Hoover Road • Van Dyke, Michigan

FULL COMPLEMENT FORMSPRAG Clutches

▲ For more details circle NED-729 K4 on enclosed inquiry slip ▲

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save mechanics' waiting time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

▲ For more details circle NED-730 K4 on enclosed inquiry slip ▲

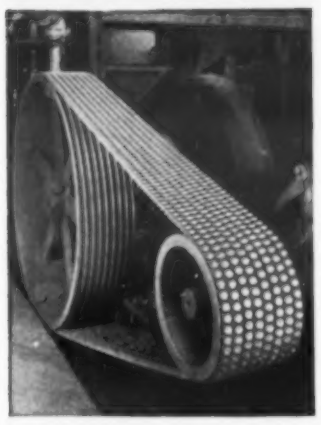
"MX" ABRASIVE PRODUCTS
finish as they cut . . . resist loading, even on soft metals, alloys

Send for this FREE booklet

Fast-cutting MX Abrasive Products by CARBORUNDUM finish as they cut . . . often let you eliminate one or more operations. They give excellent performance on soft metals such as copper, magnesium, aluminum and aluminum alloys—as well as on steel and steel alloys. MX abrasive products are available in a wide range of grit sizes, and in an extensive selection of forms and shapes, including: Straight wheels for combined deburring and light polishing; mounted wheels and points for high speed portable grinding in hard-to-reach spots; sticks for hand finishing and spinning operations; discs for grinding light welds, removing flash and blending and semi-finishing flat surfaces; depressed center wheels for light and medium weld removal and rough blending flat surfaces—as well as light cutting-off and slotting; production cut-off wheels for non-ferrous metals and dry-cutting with portable equipment; and general purpose cut-off wheels. Complete information on MX products is contained in this 40-page booklet, which is yours for the asking. Use the inquiry form provided by this publication, or—if you prefer, write **The Carborundum Company,** Dept. NED 81-45, Niagara Falls, New York.

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N. Y.

▲ For more details circle NED-731 K4 on enclosed inquiry slip ▲



New VEELOS TD and TE Adjustable V-belts for D and E Drives

...easier to couple and uncouple

...longer lasting

THIS new Veelos is *installed quickly* without removing the outboard bearings found on most D and E drives. It is the easiest V-belt to couple and uncouple ever developed. Cup-washers and T-screws join links together to form individual belts of any length. Veelos TD and TE *lasts longer*. New high-tensile strength links plus the new stud, cup-washer and T-screw design give *added strength*—combine this added strength with *maximum flexibility* for cooler, smoother running.

Veelos is known as Veelink outside the United States.

VEELOS THE LINK V-BELT

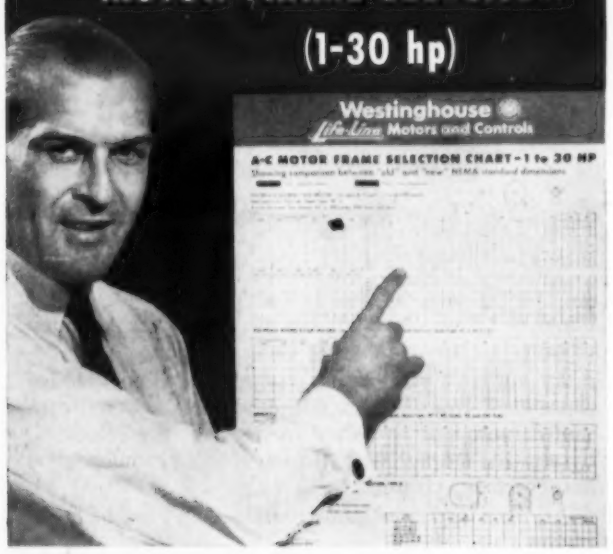
Get the complete story of this great new V-belt for D and E drives. Send for new 8-page illustrated catalog.

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive

For more details circle NED-732 K4 on enclosed inquiry slip

Free NEW GUIDE TO A-C MOTOR FRAME SELECTION (1-30 hp)



This WALL CHART saves time in comparing old and new NEMA frame dimensions for...

- general-purpose a-c motors
- wound-rotor motors
- single-phase motors
- a-c flange-mounted motors

Here's a quick and ready reference to the new NEMA frame number for each type of a-c motor application (1-30 hp). Start with the rpm and horsepower requirements for a motor, then simply follow across this wall chart to locate the correct, new NEMA frame number and all its basic frame dimensions.

In addition, directly above this information are given the standard dimensions for the corresponding old NEMA frame number. Thus, you have a complete selection guide and comparison table in convenient, durable, chart form ready for wall hanging.

J-21783

YOU CAN BE SURE...IF IT'S Westinghouse

Westinghouse Electric Corporation
3 Gateway Center, P. O. Box 868
Pittsburgh 30, Pennsylvania

Please send me copies of the Westinghouse A-C Motor Frame Selection Wall Chart—DC 463

Name_____

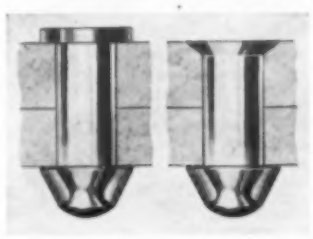
Firm_____

Address_____

City_____ State_____

For more details circle NED-733 K4 on enclosed inquiry slip

TITANIUM ALLOY RIVETS
retain strength at high temperatures



Minimum shear strength of 95,000 psi is provided by Hi-Shear rivets made from C-130AM titanium alloy. Fasteners offer 40 per cent weight savings over same rivets in alloy steel without decreasing structural strength. Hi-Shear rivets are essentially threadless bolts, consisting of a high-strength pin and a malleable aluminum collar which is swaged into groove near end of pin. They retain useful strength at temperature from 800 to 1800° F and will resist corrosion in marine atmospheres and sea water as well as in chemical environments that attack other metals. Made by **Pheoll Mfg. Co.,** Dept. NED, 5720 W. Roosevelt Rd., Chicago 50, Ill.

For more details circle NED-734 K4 on enclosed inquiry slip

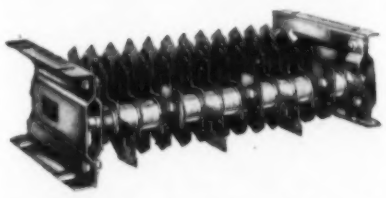
TINY PRECISION MOTOR
1/2000-hp unit runs on batteries

This tiny precision electric motor which measures overall only 1 x 1⅜ x 1⅜ in. and weighs 1.6 oz can be used in all types of simple appliances, toys, kits and displays. The 1/2000-hp, 6000-rpm motor is powered by 1½ to 6-v flashlight batteries and draws 0.21 amp at 2 v. It is self-starting, reversible, nonheating and yields long battery life. Shaft, which is 1⅞ in. long by 0.094-in. OD, can vary as to length and position, and other horsepowers, within limits, can be specified. Made by **Hi-Spex Mfg. Co.,** Dept. NED, 319 Schuyler Ave., Kearny, N. J.

For more details circle NED-735 K4 on enclosed inquiry slip

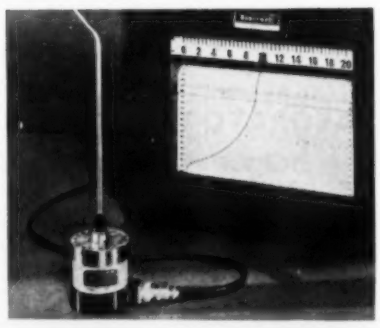
MILL TYPE RESISTOR
is welded and unbreakable

Complete grid assembly of the Bulletin 11011 all welded mill type grid resistor can be withdrawn from its frame without disturbing the grid box end frames or other boxes in the resistor stack. Nonbreakable unit has grid rod and end plate construction which automatically compensates for thermal expansion of individual grids. Individual grids are punched from a chromium steel alloy. Continuous current capacities up to 180 amp per box in ratings from 1/10 to 10 ohms are available. All grids are insulated for 600-v service. Made by **Cutler-Hammer, Inc.,** 574 N. Twelfth St., Milwaukee 1, Wis.



For more details circle NED-736 K4 on enclosed inquiry slip

PRESSURE TRANSMITTER
strain gages give high accuracy



Accurate transmission of pressure information from remote or hazardous locations to a central control room which can be several thousand feet distant is provided by Teledyne bonded strain gage transmitter. Instrument has stainless steel pressure chamber and diaphragm and is constructed to resist corrosive gases and fluids including fuming nitric acid. Pressure changes transmitted through diaphragm and leverage system to four strain gages cause proportional electrical unbalance. Strain gages are bonded firmly to metal to limit shock and vibration effects, and electrical circuit is fully compensated for temperature change. Transmitter is suitable for working pressures up to 1000 psi. Made by **Taber Instrument Corp.,** Section 16, 111 Goundry St., North Tonawanda, N. Y.

For more details circle NED-737 K4 on enclosed inquiry slip

Acme FLOW-TEMP® heat pump

. . . ideal comfort conditioner for small and medium size buildings*

industrial
commercial
institutional
residential

Today, heat pumps are proving their advantages in all climates for cooling and heating. An Acme Flow-Temp unit removes heat from water or ground sources and distributes it through Acme Remote Room Conditioners or a radiant floor, wall, or ceiling system. A simple flick of the wrist and the Flow-Temp Heat Pump changes from heating to cooling.

Before you install any conventional heating and air conditioning system, investigate the Acme Flow-Temp Heat Pump. Acme Heat Pumps are available in a wide range of capacities.

*Acme's Flow-Therm Heat Pumps for larger buildings.

ACME AIR CONDITIONING REFRIGERATION

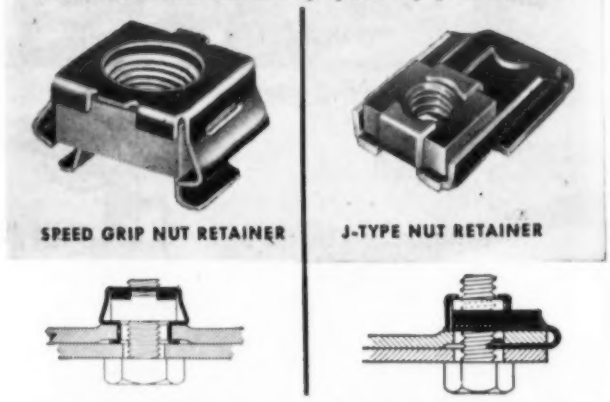
ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Air Conditioning and Refrigeration Industry since 1919

For more details circle NED-738 K4 on enclosed inquiry slip

TINNERMAN Speed Grips®

... snap into place by hand, are self-retaining. Save time and material, speed up production!



Tinnerman nut retainers are making production savings of more than 50% for manufacturers everywhere. Welding, staking, riveting operations are out with these self-retaining fasteners. Ideal for blind locations, built-in floating alignment prevents cross threading. No retapping of paint-clogged threads, Tinnerman nut retainers can be applied after painting. Easily attached by hand; no need for special tools, jigs or skills. Available in a full range of sizes for light or heavy attachments. For complete details write:

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

For more details circle NED-739 K4 on enclosed inquiry slip

high jobs go fast on the

safety level.....

Dayton's special "Safety Level" working platform gives workman complete confidence. He works faster, more efficiently, uses both hands. Check the "big 6" features that make Dayton your best buy.

1. Rail-guarded "Safety Level" platform.
2. Locks in place automatically.
3. Rubber safety shoes.
4. Light weight—great strength.
5. Economically priced.
6. Complete size range 3' to 16' in height.

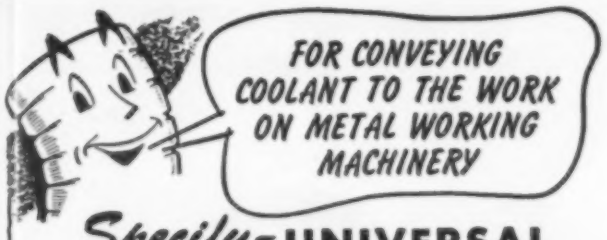
Write for Bulletin

Dayton safety ladders

Dayton safety ladder co.
2339 GILBERT AVENUE
CINCINNATI, OHIO

In Canada:
Safety Supply Co., Toronto

For more details circle NED-740 K4 on enclosed inquiry slip



Specify-UNIVERSAL
FLEXIBLE STEEL COOLANT NOZZLES

STANDARD ASSEMBLIES available from stock: 1/4", 1/4", 3/8", 1/2", 3/4", male one end, nozzle other end. 6", 9", 12", 15", 18", 24", 30", 36" lengths. Intermediate or longer lengths made to order.

Write for Schedule U-55 for complete data

UNIVERSAL METAL HOSE CO.

2155 South Kedzie Avenue Chicago 23, Illinois

For more details circle NED-741 K4 on enclosed inquiry slip

HEAVY DUTY TRAILERS

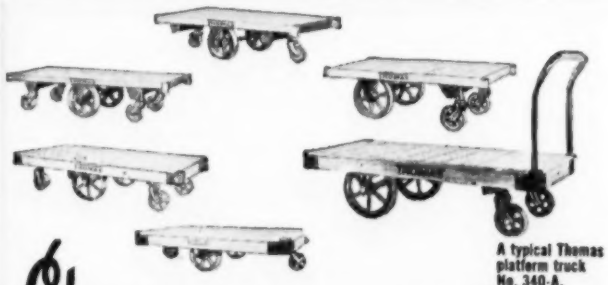
No. 285
(20 TON CAPACITY)

THOMAS can build the trailer you need in capacities up to 60 tons. The rugged structural steel channel frame has 3 or more lengthwise members and is topped with a heavy steel plate deck of "Job-Suited" size. A double ball race fifth wheel assures easy maneuvering with any load. Ring-type handle and choice of rear couplers. Stake pockets as desired.

There is a THOMAS Representative in every Trade Area. Write for free literature describing the complete line of THOMAS "Job-Suited" Trailers, Trucks, Casters and Wheels.

THOMAS
THOMAS TRUCK & CASTER CO.
524 MISSISSIPPI RIVER, KEOKUK, IOWA

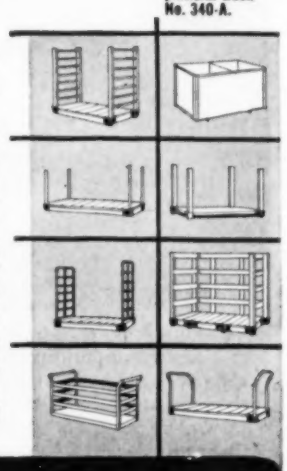
For more details circle NED-742 K4 on enclosed inquiry slip



A typical Thomas platform truck No. 340-A.

Choose FROM SIX DIFFERENT TRUCK CHASSIS and 1000 superstructures

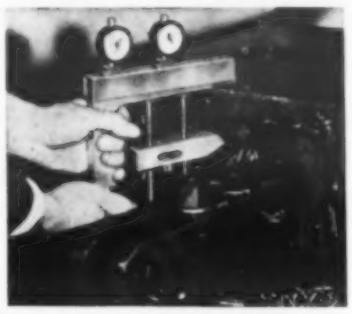
The Thomas "Job-Suited" plan enables you to choose quickly and accurately the most efficient truck for your particular freight or materials handling problem. FIRST—you choose any chassis or running gear that will *carry* your load. SECOND—you choose one of the 1000 superstructures to *hold* your load. PRESTO—you have a Thomas "Job-Suited" truck specially tailored to your needs! ANY CAPACITY, ANY SUPERSTRUCTURE, FOR ANY USE!



Write for Free Catalog giving "Job-Suited" particulars.
THOMAS TRUCK & CASTER CO.
524 Mississippi River, Keokuk, Iowa

For more details circle NED-743 K4 on enclosed inquiry slip

PORTABLE HARDNESS TESTERS
check inside or outside surfaces



Laboratory and production testing are facilitated with two models of portable hardness testers. Model PHT-1 checks up to 4½-in. diameter specimens, while Model PHT-2 has 12 - in. diameter capacity. They save time because they can be taken right to work. Employing standard Rockwell indenter and loadings, they give direct readings in Rockwell A, B, C, D, F and G scales. Handy carrying cases protect instruments. Made by **American Machine & Metals, Inc.**, Riehle Testing Machines Div., Dept. NED, East Moline, Ill.

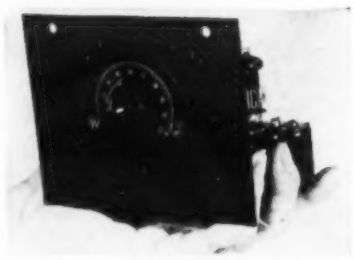
For more details circle NED-744 K4 on enclosed inquiry slip

RESISTANCE WELDER
dual heads adjust independently

Dual heads of this 1-kva small parts resistance welder are independently adjustable for pressure, time and heat. Electrodes and holders are adjustable in all directions for wide variety of setups. Cabinet contains heads, timers, controls and transformer, and handles strip and wires up to 1/32-in. Air-cooled 1/8 or 3/32-in. electrodes are used and maintain constant pressure on work regardless of pedal movement and force. Timers use cold cathode thyratron tubes which are active only during actual welding cycle. Unit operates from 220-v, 60-cycle single phase outlet. Made by **Royson Engineering**, Hatboro, Pa.

For more details circle NED-745 K4 on enclosed inquiry slip

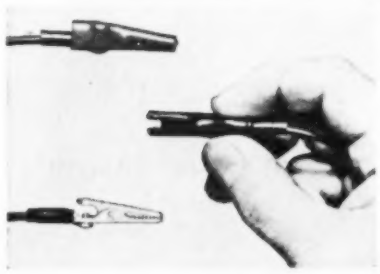
INTERVAL TIMER
electronic, 0.05 to 7-second range



Compact type 12 MC electronic interval timer is suitable for push - button, foot switch or other actuation of controlled interval operation of spot welders, punch presses, molding and other machines. Cathode tubes give accurate continuously adjustable intervals from 0.05 to 7 seconds without warmup. Single-pole double-throw relay has normally-open 10-amp contacts. Timer requires 0.1 w for operation from any 105/125-v 25 to 400-cycle ac source. Model 1, illustrated, is designed for panel mounting. Model 2 is mounted in a lacquered steel box measuring 3 x 4 x 5 in. Made by **G. C. Wilson & Co.**, Dept. NED, 1950 Eighth Ave., Huntington, W. Va.

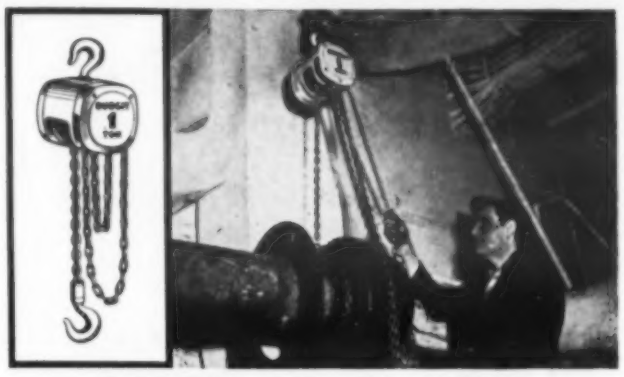
For more details circle NED-746 K4 on enclosed inquiry slip

ALLIGATOR CLIPS
have flexing skin-tight insulators



Skin - tight two-piece insulator which jackets cadmium-plated steel and solid copper alligator clips adds but little size to the clip (15/64-in.) and covers it right down to the tip. Lip action slot in the flexing insulator allows clip to "bite" connection without exposing the teeth. Clips can be closely compacted on crowded connections with complete protection. Insulator is highly dielectric plastic and consists of tubular section to cover clip tail and tapered section to cover jaws. Red or black colors are available for identification. Made by **Mueller Electric Co.**, 1567L E. 31st St., Cleveland 14, O.

For more details circle NED-747 K4 on enclosed inquiry slip



SAVES AS IT LIFTS

It's the 'Budgit' Aluminum Chain Block, the one-man hoist that's light, easy to carry, hang up and use anywhere for spot-lifting. The 1/4-ton size weighs only 29 lbs., yet the full load can be lifted smoothly with a hand chain pull of only 25 lbs.

The 'Budgit' Aluminum Chain Block is tough — gives economical, long-life performance in everyday service. Spur-geared efficiency speeds lifting, and the big automatic load brake and over-capacity hooks and heat-treated load chain completely safeguard man, load, and hoist. Capacities: 1/4, 1/2, 1 and 2 tons. Ask your "Shaw-Box" Distributor for detailed information or write for Bulletin 398.

'Budgit'® CHAIN BLOCKS

MANNING, MAXWELL & MOORE, INC.
Muskegon, Michigan

Builders of "Shaw-Box" and 'Load Lifter' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, 'American' Industrial Instruments, and Aircraft Products.

For more details circle NED-748 K4 on enclosed inquiry slip

SAVES HANDS FROM DERMATITIS

CLEANS SKIN ON THE JOB

Hammons WATERLESS CLEANER

GETS ALL THE DIRT

HAMMONS DISPENSER gives 60-second cleaning AT THE WORK AREA instead of 6 minutes in plant washroom! Removes shop dirt, paint, grease, Perma-tex, etc. Contains U.S.P. grade lanolin, glycerin and hexychlorophene to guard against dermatitis.

HAMMONS PRODUCTS, INC.
1141 W. WILDWOOD, FORT WAYNE 6, IND.

For more details circle NED-749 K4 on enclosed inquiry slip

Instant Heat Flow . . . Hands Completely Dry in 20 Seconds.

Proven More Sanitary Than Any Other Method of Hand Drying by Impartial Tests of U. S. Public Health Service

AND HERE'S WHAT HAPPENS WHEN YOU INSTALL NATIONAL HAND DRYERS:
- Recurring towel and laundry expense ended forever.
- Maintenance costs reduced to a minimum.
- No more plumbing expenditures for towel-clogged toilets.
- Absence of unsanitary towel litter.
- No used towel ends to pass along germs.
- Automatic 24-hour service . . . ends complaints about empty towel containers.
- Fastest drying action . . . relieves congestion in washrooms.
- No chapping of hands or face.
- Small compact design leaves washroom free from clutter.

END RECURRING TOWEL EXPENSE Forever by installing NATIONAL HAND DRYERS! Never Again COSTLY WASHROOM MAINTENANCE . . . TOWEL LITTER

PAID FOR THEMSELVES IN 6 MONTHS AT TOUREK MFG. CO. as reported in Factory Management and Maintenance

LEARN HOW YOU CAN SAVE 85¢ OUT OF EVERY MAINTENANCE DOLLAR. No obligation, of course.

Mail This Coupon Today

NATIONAL DRYER SALES CORP. Dept. 22
616 W. Adams St., Chicago 6, Illinois

Send me the facts. Cost comparison of towels vs. National Hand Dryers, Public Health Service Reports and descriptive literature.

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

For more details circle NED-750 K4 on enclosed inquiry slip

Move more live weight in

BAL MILL BOXES

Less weight with greater durability is yours in Mill Boxes made with hard vulcanized Aerofibre. This material weighs 50% less than Aluminum and it wears like armor plate . . . there's nothing like it!

With Bal construction you get full attention to essential details, too—like Bal's exclusive No-Tip Bulge Corner in stacking types (inset). Bal Mill Boxes are made in all sizes, and to special order.

Bal also builds factory trucks, tote boxes, and similar materials handling specialties.

Write for complete catalog

SINCE 1898 william BAL corporation 11 JOHNSON ST. NEWARK 5, N. J.

▲ For more details circle NED-751 K4 on enclosed inquiry slip ▲

GET THE FACTS

on this new

COST-SAVING

Boiler Advantage!

Now . . . for the first time you can get packaged boiler units with fuel flexibility over the wide range of capacities from 15 to 500 HP . . . light or heavy fuel oil—natural or manufactured gas—or combination gas and oil . . . and you get this cost-saving advantage *only* with

Powermaster®

PACKAGED AUTOMATIC BOILERS.

MODEL 4
◀ 15 to 100 HP

MODEL 3
40 to 500 HP ▶

Find out how YOU can profit from *Powermaster's* new exclusive "choice of two" Packaged Automatic Boilers to meet your specific operating requirements . . . to your best advantage.

If you SPECIFY . . . SELECT . . . INSTALL . . . OPERATE . . . MAINTAIN boilers . . .

SEND NOW for bulletin describing this latest *Powermaster* advantage and other cost-saving features.

ORR & SEMBOWER, INC.

Morgantown Road, Reading, Pa.

▲ For more details circle NED-752 K4 on enclosed inquiry slip ▲

HONING MACHINE
incorporates coolant unit

Pedestal model honing machine features a honing range of from 0.185 to 2.500 in. and spindle speeds from 400 to 1000 rpm. All mandrels fit into the spindle of the model JCP machine with a bayonet lock. Mandrels or stones may be changed without tools. Machine permits honing over keyways, spline gears and most broken surfaces. A counterbalanced foot pedal is adjustable to any desired pressure. Integral coolant unit has an expandable splash tray with a 10-in. extension. Its hose can be flexed to aim at any point and nozzle flow is also adjustable. Made by **Superior Hone Corp.**, 1613 Elreno St., Elkhart, Ind.

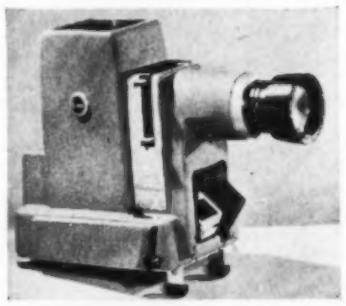
▲ For more details circle NED-753 K4 on enclosed inquiry slip ▲

PIPE STRAINERS
for steam, air, water, oil lines

Eight sizes from ¼ to 2 in. are available in line of cast semisteel Y-type pipe strainers for steam, air, water, oil and gas lines at pressures to 250 psi. Straight bushing threads ease removal of bushing and screen, with only a light torque being required to assure a leak-tight seal. Type 430 stainless steel screens are standard, perforated with 225 holes of 0.045-in. diameter per square inch or 20 x 100 mesh wire cloth. Screens of other materials are available on special order. Made by **Armstrong Machine Works,** 819 Maple St., Three Rivers, Mich.

▲ For more details circle NED-754 K4 on enclosed inquiry slip ▲

FILMSTRIP PROJECTOR
also shows 2 x 2-in. slides

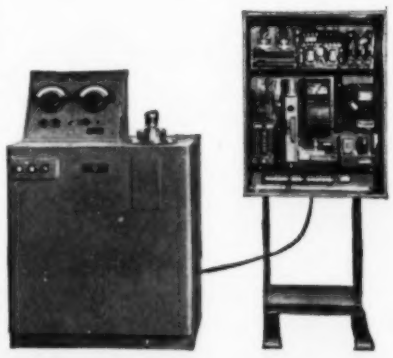


Conversion from showing single-frame filmstrip to 2 x 2-in. slides is made on the Signet 500 projector by loosening a screw and interchanging filmstrip adapter and slide-feeding mechanism. Image portion of filmstrip is protected from scratching as it moves through the projector. Semi-automatic slide changer provides for feeding slides singly from the top of the projector. After projection, slides are accumulated in a box in order of showing. Blower-equipped unit is offered with choice of f/3.5 or f/2.8 Ektanon lens. Made by **Eastman Kodak Co.,** Dept. E, 343 State St., Rochester 4, N. Y.

▲ For more details circle NED-755 K4 on enclosed inquiry slip ▲

BALANCING MACHINE
checks up to 240 parts per hour

Check balancing of up to 240 parts per hour is possible with this vertical static balancing machine which operates on "go-no go" principle. Operator merely puts part on spindle and starts machine. If unbalance falls within preselected ounce - inch tolerance, green light appears on panel. Excessive unbalance is indicated by red light. Signals are controlled by separate unit which can be set for any desired tolerance of unbalance. Machine can also operate as standard static balancing machine. Made by **Tinius Olsen Testing Machine Co.,** Balancing Dept., 4080 Easton Rd., Willow Grove, Pa.



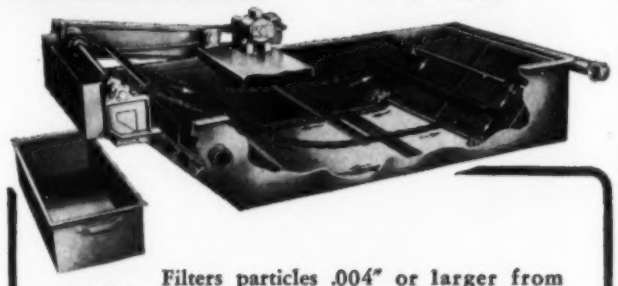
▲ For more details circle NED-756 K4 on enclosed inquiry slip ▲

INSIST ON THE BEST...

▲ For more details circle NED-757 K4 on enclosed inquiry slip ▲

New! *Filters Small Solids...*

Delpark Settling and Filter SYSTEM



Filters particles .004" or larger from liquids of varying viscosity containing solids of different particle sizes and weights.

Power-driven expeller flights, solid and of special bristle brushes, sweep solids from the screen and settling area up a ramp at the opposite end. A special cleaning device removes the solids from the flights before their return to the filter. Screens easily removed for manual cleaning. A blank metal sheet replaces the screen during cleaning.

WRITE FOR NEW BULLETIN

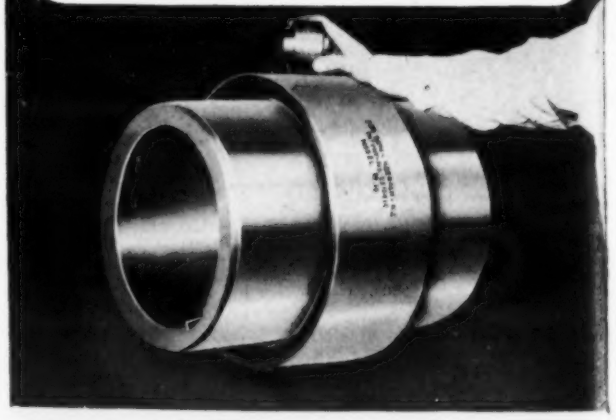
INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

▲ For more details circle NED-758 K4 on enclosed inquiry slip ▲

Flangeless Gear Couplings

SLASH DIRECT-DRIVE COSTS

of lightest to heaviest equipment

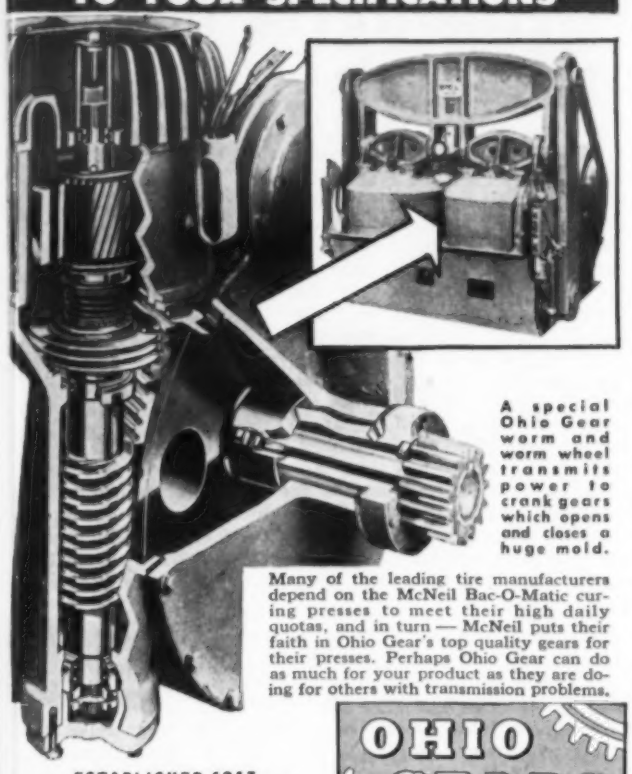


No nuts, bolts, flanges—slash down-time . . . cut assembly, operating, maintenance costs. Provide terrific savings in size, weight—size 10 shown weighs less than ⅓ as much as any other heavy-duty type! Horsepower capacity is *greater* because a *one-piece sleeve* transmits the load—*not* bolts. Call your Sier-Bath Coupling Distributor, or send for 16-page CATALOG. *Sier-Bath Gear & Pump Co., Inc., 9240 Hudson Blvd., North Bergen, N. J.*

Flexible
Sier-Bath GEAR COUPLINGS
Founded 1905 *Also mfrs. of Precision Gears, Rotary Pumps* Member A.G.M.A

▲ For more details circle NED-759 K4 on enclosed inquiry slip ▲

POWER TRANSMISSION TO YOUR SPECIFICATIONS



A special Ohio Gear worm and worm wheel transmits power to crank gears which opens and closes a huge mold.

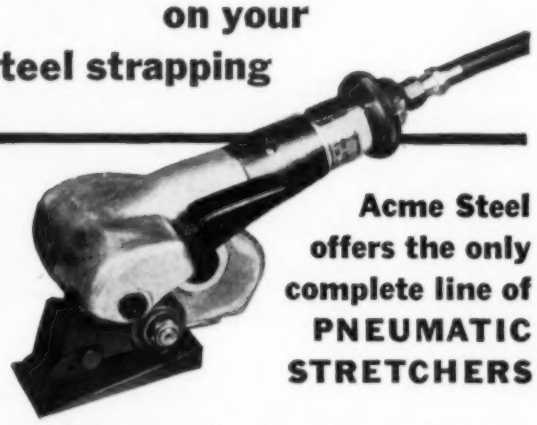
Many of the leading tire manufacturers depend on the McNeil Bac-O-Matic curing presses to meet their high daily quotas, and in turn — McNeil puts their faith in Ohio Gear's top quality gears for their presses. Perhaps Ohio Gear can do as much for your product as they are doing for others with transmission problems.

OHIO GEARS

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 EAST 179th STREET • CLEVELAND 10, OHIO

▲ For more details circle NED-760 K4 on enclosed inquiry slip ▲

AIM for preset tension on your steel strapping



Acme Steel offers the only complete line of PNEUMATIC STRETCHERS

These new time-saving Acme Steel Strapping Tools can be set in advance for uniform, consistent tension. There's no guesswork. The Pneumatic Stretchers do the work—reducing employee fatigue. There are Acme Steel Pneumatic Stretchers for tensioning strapping on all sizes and shapes of containers, packages and bundles . . . and a model to suit your needs. For details, write Acme Steel Products Division, Dept. JK-104, Acme Steel Company, 2840 Archer Avenue, Chicago 4, Illinois.

AIM *for Safe, Lower-Cost Shipping* ACME STEEL

▲ For more details circle NED-761 K4 on enclosed inquiry slip ▲

IT TAKES LESS TIME TO MICRO-FINISH HARD MATERIALS WITH

ELGIN DIAMOND

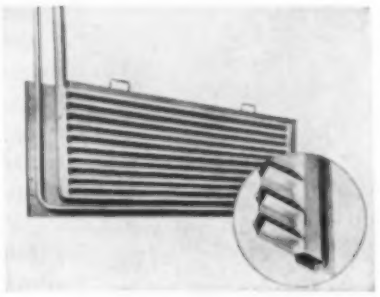
This booklet will help you Write for your free copy now!

See pictures of Elgin diamond in application . . . gives details of method, grades to use and time required. Write today!

ABRASIVES DIVISION
ELGIN NATIONAL WATCH COMPANY
Dept. I
ELGIN, ILL.

▲ For more details circle NED-762 K4 on enclosed inquiry slip ▲

HEAT TRANSFER UNITS of corrosion resistant metals



Addition of Platecoil heat transfer units made of Ampco alloy, Carpenter 20 alloy, Hastelloy B and Hastelloy C permits units to be used in pickling, hydrochloric acid installations, petroleum processing and other applications involving salt water, sulphic acid and chromic acid. With previously made cold rolled steel, stainless steel and Monel units, heat transfer units will resist over 200 different corrosive media. Made by **Tranter Mfg., Inc.**, 510 E. Hazel St., Lansing 4, Mich.

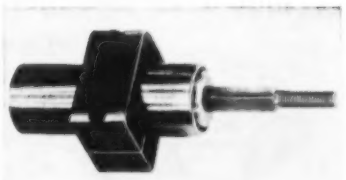
▲ For more details circle NED-763 K4 on enclosed inquiry slip ▲

NONMAGNETIC TEST INDICATOR remains accurate in magnetic field

Case, lever, contact point and hair spring of this Testmaster universal test indicator are nonmagnetic so that instrument will read accurately even in a magnetic field. Two models readily adjust to many types of tool posts, height and surface gages and other inspection devices. Model 1 is graduated in 0.001-in., with range of 0.030-in., while model 2 is graduated 0.0001-in., with range of 0.008-in. Features include reversible index point which can be set at any angle within 180-degree arc, full-jeweled bearings and a combination lever and crown gear movement with hair spring to take up gear backlash. Made by **Federal Products Corp.**, 1118NRI Eddy St., Providence 1, R. I.

▲ For more details circle NED-764 K4 on enclosed inquiry slip ▲

CLAMPING FIXTURE CYLINDER in 1, 2, 3 and 4-in. strokes



Shops that design their own guide rods for small clamping and locating fixtures can realize savings in time and expense with the No-Ro-Fix square rod clamping fixture cylinder. Unit is supplied with 1-in. bore, having a ⅛-in. pipe thread air connection, and in 1, 2, 3, and 4-in. strokes with spring return. Chrome-plated steel piston rod is supported by long, oversize bronze bearing, and standard O-ring forms seal. Cylinder barrel is nickel-plated brass. Loosening one screw in mounting block permits adjustment of cylinder to its full length in the block. Made by **Beckett-Harcum Co.**, 1147 Wayne Rd., Wilmington, O.

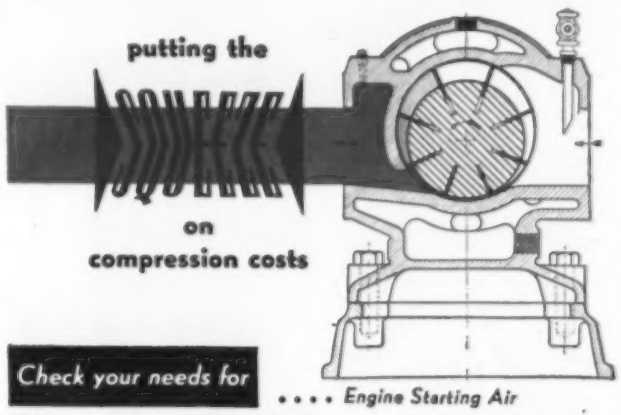
▲ For more details circle NED-765 K4 on enclosed inquiry slip ▲

SPRAY DECORATING MACHINE spray finishes up to 1500 pieces per hour through masks

Painting of depressed or raised spots on die casts, fine detailed dials and control knobs, bumpers and grilles on toy autos and similar jobs can be performed by this stationary gun pressure contact spray decorating machine. It paints areas up to 3 x 1½ in. and has a capacity of up to 1500 pieces per hour, depending upon shape and size of part.

Placing part into the mask and depressing the table top about ¼-in. starts the paint operation. Timer controls length of spray time for uniform paint application and regulator and gage maintain constant air pressure. Machine requires floor space of 18 x 26 in., can have one or two guns and has a built-in air exhaust outlet. Made by **Conforming Matrix Corp.**, 338-2 Toledo Factories Bldg., Toledo 2, O.

▲ For more details circle NED-766 K4 on enclosed inquiry slip ▲



Check your needs for . . . . Engine Starting Air

Pneumatic Power • Pneumatic Controls • Refrigerant Compression • General Plant Air • Air Lifts

When you consider all the many uses you have for compressors—consider the best way to get compression with dependability, and minimum cost and attention.

Fuller Rotary Compressors have so many inherent advantages that they warrant your closest examination. Free from reciprocating parts, with no valves to leak or seats to grind, no unbalanced forces to set up vibration. Fuller Rotary Compressors assure low-cost, smooth-flow operation during their long life.

Check your own compressed-air needs and send this check list to Fuller. A Fuller engineer will give you the *right* recommendation to save you money. Write now to Fuller Company, Catasauqua, Penna.

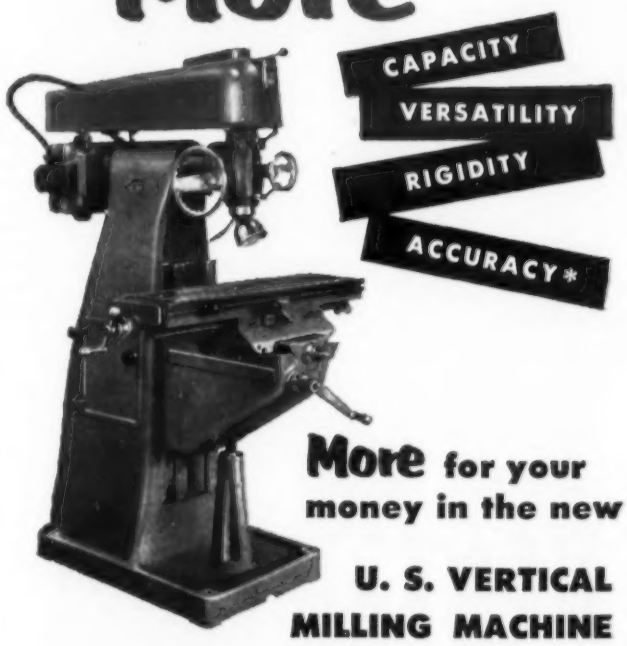
Fuller Pioneers of high-efficiency vane-type rotary compressors

FULLER COMPANY, Catasauqua, Pa. C-235A 2078

Branch Offices: Chicago • San Francisco • Los Angeles • Seattle • Birmingham

▲ For more details circle NED-767 K4 on enclosed inquiry slip ▲

More



More for your money in the new U. S. VERTICAL MILLING MACHINE

U. S. Vertical's balanced rigidity is the key to profitable production. Make the same comparison made by hundreds of plants. See why they find the U. S. Vertical to be the low-cost mill they demand. New "U. S." features include hard chrome plated quill, precision honed head and overarm bosses; and a quick change collet draw bar.

Write today for complete details. The U. S. Burke Machine Tool Division, 2 Brotherton Road, Cincinnati 27, Ohio.

*Accuracy Certified! Check list showing results of actual inspection tests accompanies each machine.

Compare FEATURES

- Balanced head and motor
- Simplified belt-speed changing
- Conveniently located reversing switch
- Protected knee gearing
- Lubricated-sealed ball bearings
- Built-in spot light
- Swing-out Tool-Keeper
- Guaranteed close tolerances*
- Hardened and ground lead screws (optional)

Compare SPECIFICATIONS

	U. S. VERTICAL
Table Size	9½" x 36"
Longitudinal Feed	24"
Cross Feed	9¾"
Knee Travel	16½"
Quill Travel	5½"
Dovetail Depth	1¼" x 1½"
Vertical Screw	1⅜" dia.
Weight	1600 lbs.
Table Power Feed	0" - 12" per min. (infinitely variable)

Check these against ALL COMPETITION!

Compare DELIVERY, TOO! . . . our new plant addition permits us to promise and fulfill prompt deliveries.

THE U·S·Burke MACHINE TOOL DIVISION

▲ For more details circle NED-768 K4 on enclosed inquiry slip ▲

NEW CATALOG 754

An Aid in the Quick Selection of Stock Roller Chains and Sprockets

Packed with helpful information and useable data, this new 64-page Catalog 754 will be found valuable to engineers and production men. How to select a stock drive; calculate chain length; installation recommendations; speed ratio tables; ready-to-use finished-bore and taper-bushed sprockets; flexible couplings and complete roller chain technical data, all pitch sizes—are some of the topics covered . . . A copy will be mailed free on request . . . DIAMOND CHAIN COMPANY, Inc., Dept 457, 402 Kentucky Ave., Indianapolis 7, Ind.

DIAMOND ROLLER CHAINS

For more details circle **NED-769 K4** on enclosed inquiry slip

Shells, beads, or American dollars—no enterprise is successful unless it shows a profit. Kester quality and performance assure you profitable production results at the lowest possible cost. To put more "wampum" in *your* "wigwam," always insist on Kester Solder!

WRITE TODAY for Kester's **NEW** 78-Page Informative Textbook, "SOLDER . . . its fundamentals and usage"

KESTER

SOLDER COMPANY

4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

For more details circle **NED-770 K4** on enclosed inquiry slip

Just drill and drive

SEL-LOK SPRING PINS

Sel-Lok Spring Pins are slotted tubular pins that lock by spring action when driven into drilled holes. They eliminate the need to hold close tolerances and perform costly tapping, reaming, peening or milling operations. The chamfered ends make starting easy; the rounded edges of the slot, found only on Sel-Lok Spring Pins, eliminate scoring of holes.

Use Sel-Lok Spring Pins as rivets, hinge pins, keys; to replace tapered, grooved and cotter pins. They are available in a full range of diameters and lengths from .062 x ¼" to .500 x 4". For more information, write to STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

SEL-LOK SPRING PIN DIVISION **sps**
JENKINTOWN PENNSYLVANIA

For more details circle **NED-771 K4** on enclosed inquiry slip

LOAD CELLS
capacity ranges are 0-50 to 0-200 lb

Providing means for weighing or measuring static or dynamic loads electronically when used with instruments having simple vacuum tube circuits, five SR-4 load cells operate on 4 to 8-v ac or dc. Three type U-1 cells for tension or compression loading have capacities of 0-50, 0-100 and 0-200 lb. Type T-1 cells for tension loads only have 0-100 and 0-200 lb ranges. Hermetically sealed, cells can also be used in controller circuits for the automatic operation of machines and processes such as batching. Made by **Baldwin-Lima-Hamilton Corp.**, Dept. T. E., Philadelphia 42, Pa.

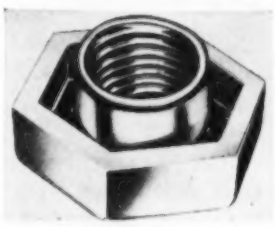
For more details circle **NED-772 K4** on enclosed inquiry slip

HYDRAULIC POWER PACK
operates from 6 or 12 v batteries

Packaged hydraulic power unit develops a variable range of pump pressures from 2000 to 5000 psi when connected to a 6 or 12-v battery. Pumpac consists of motor, pump, oil reservoir and valve. Motor and pump are easily disassembled for maintenance or repair. Pump housing will accommodate relief valve assembly if required. Unit can be arranged for vertical operation. Made by **Jarp Corp.**, 854 S. Tenth St., Wausau, Wis.

For more details circle **NED-773 K4** on enclosed inquiry slip

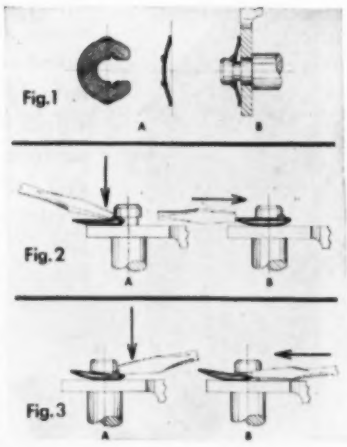
LIGHTWEIGHT HEX NUT
high axial strength, heat resistance



Lightweight Kaylock hex nut with high axial strength far exceeds all BUAER and USAF requirements for AN363 high temperature nut and the AN 365 standard hex nut, yet is dimensionally interchangeable with the AN364 thin shear nut. Of cadmium plated spring steel construction, nut has locking design wherein upper threads are made elliptical and resilient, allowing all threads to carry load without auxiliary locking device. It withstands up to 550° F. Nut is available in 6-32, 8-32, 10-32, ¼-in.-28, 5/16-in.-24, ⅜-in.-24 and 7/16-in.-20 sizes. Made by **Kaynar Co.**, Kaylock Div., 820-A E. Sixteenth St., Los Angeles 21, Calif.

For more details circle **NED-774 K4** on enclosed inquiry slip

RETAINING RINGS
for ⅛ to ½-in. diameter shafts



Two prongs extending from inner circumference of the open end lock this Truarc radially - applied series 5139 retaining ring in its groove when fastened to a shaft. Ring is made of spring steel and is shaped like a bowed horseshoe. Sizes to accommodate shafts from ⅛ to ½-in. are standard, and shear strength ranges from 500 to 2500 lb. Fastener is positive-locking against radial displacement, permitting it to be used as a shoulder against rotating parts. Photo shows ring mounted on shaft, Fig. 1; and mounting and removing ring from shaft with screwdriver only, Fig. 2 and 3. Made by **Waldes Kohinoor, Inc.**, Dept. 057, 47-16 Austel Pl., Long Island City 1, N. Y.

For more details circle **NED-775 K4** on enclosed inquiry slip

New Banister Dust Collector ELIMINATES DUST PROBLEMS!

Now, with today's most outstanding dust collector, the Banister *Dustmaster*, you can efficiently and economically solve your dust problems! The *Dustmaster* is a modern, efficient cyclone which separates dust from air by means of centrifugal force. It incorporates the simplest yet most practical design features. It has high collection efficiency and low energy loss; it is economical to install; and it requires a minimum of space. It has wide application in many industries for removing nuisance and hazardous dusts . . . thereby reducing equipment maintenance, increasing productivity, improving product quality, and maintaining a clean healthful working atmosphere. It's also ideal for recovering valuable materials from dust.

Send us your dust problem and we'll show you specifically how the *Dustmaster* can solve it . . . or write today for big, fully illustrated *Dustmaster* catalog and case history material showing how Banister *Dustmaster* Systems solved many so-called "impossible" dust situations. **A. W. Banister Co., Inc., 21 Charles St., Cambridge, Mass.** . . *dust collecting and pneumatic air system specialists since* 1911. *Advt.*

For more details circle **NED-776 K4** on enclosed inquiry slip

Quick-Change . . .

Manchester Cut-Off Tool . . .

● New P.D.Q. "Manchester" cut-off tool offers *15 SECOND* tool change. Loosen only one screw to change carbide insert. "V" design on support blade and insert makes this tool self-centering and highly accurate. Adjustable rear stop provides positive insert backing and quick adjustment after insert is re-ground.

Tools are available for turret lathes, engine lathes, automatics and cut-off machines... Write for literature and specifications covering *ALL* the new "Manchester" tool features.

PORTAGE Double-Quick TOOL CO.
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Save production time and money on your deep hole parts with our specialized service.

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- **HOLLOW BARS**
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85 Prescott Street
WORCESTER, MASS.

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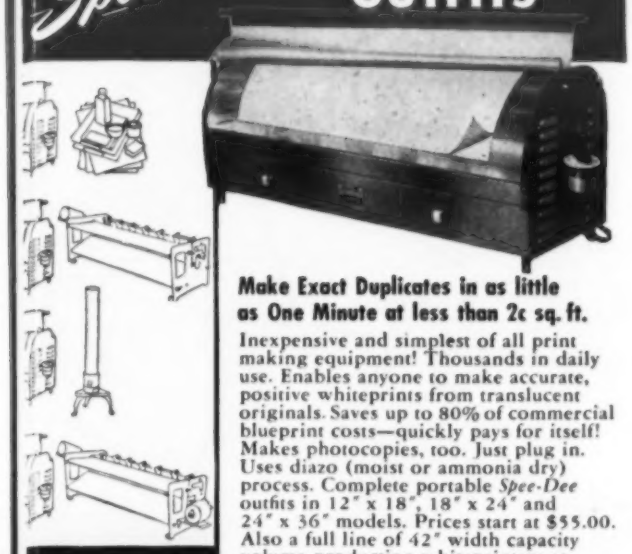

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Inexpensive and simplest of all print making equipment! Thousands in daily use. Enables anyone to make accurate, positive whiteprints from translucent originals. Saves up to 80% of commercial blueprint costs—quickly pays for itself! Makes photocopies, too. Just plug in. Uses diazo (moist or ammonia dry) process. Complete portable *Spee-Dee* outfits in 12" x 18", 18" x 24" and 24" x 36" models. Prices start at $55.00. Also a full line of 42" width capacity volume production whiteprinters at moderate prices.

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PECK & HARVEY

Mfrs. of Whiteprint, Blueprint & Photocopy Equipment

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move it → or stack it ↑ with Brusco parts handling equipment

BRUSCO DROP DOOR PARTS BOX

No. 558 BRUSCO CORRUGATED SKID BOX

No. 559 BRUSCO CORRUGATED SKID BOX

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Save time, space, dollars. BRUSCO is *all steel*, welded for *strength* and *rigidity*. Meets every problem of materials handling. Ask for Bulletin 550.

BRUMMELER STEEL PRODUCTS CORPORATION

1411 Ionia Ave., S. W. Grand Rapids, Michigan

For more details circle NED-780 K4 on enclosed inquiry slip

NEW JOHN CRANE Electro-Pneumatic TUBE ROLLING CONTROL

for:
CONDENSERS
HEAT EXCHANGERS
BOILERS
EVAPORATORS
COOLERS
FEED WATER HEATERS

Here is a tube rolling method that outdates all others! Recognizing the long standing fact that air provides the best method of operation, this principle is now combined with positive electrical control. Result: 1) tube rolling is substantially speeded up; 2) human error is eliminated; 3) both ferrous and non-ferrous tubes can be rolled in all sizes from ¼" to 4"—*using only one control.*

The "John Crane" Electro-Pneumatic Tube Rolling Control assures the correct amount of tube expansion into the sheet to provide the exact holding strength and tightness required by the service. "Weepers" or "leakers" are eliminated. "Cold work" stress is minimized. Distortion or fracture of tube sheet ligaments is prevented. *A skilled operator is not required.*

See the new "John Crane" Electro-Pneumatic Tube Rolling Control in action on your own operation. Without obligation to you, we will arrange for a demonstration in your plant. Contact us today. Request 8-page illustrated catalog.

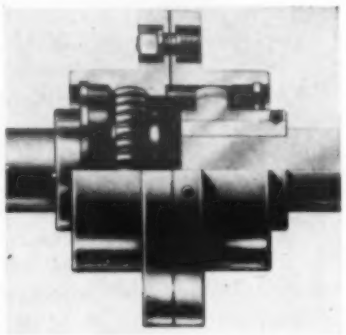
Crane Packing Co., 1811 Cuyler Ave., Chicago 13, Ill.

In Canada: Crane Packing Co., Ltd., 617 Parkdale Avenue, N., Hamilton, Ont.

JOHN CRANE CRANE PACKING COMPANY

For more details circle NED-781 K4 on enclosed inquiry slip

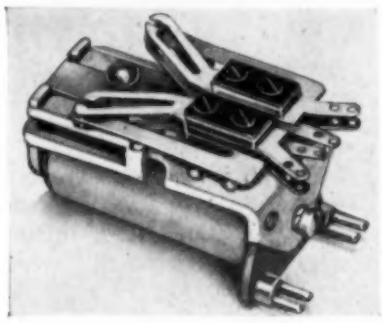
GEARED COUPLING
compensates for misalignment



Total of ±7 degrees of misalignment is compensated for by standard Sphereflex geared coupling. Male teeth of this unit are cut on a spherical arc so that they maintain constant contact area with the straight-root internal teeth despite misalignment. Design prevents thrust load on bearings and gives high power transmission for size. Standard types are available in sizes 0 through 6 (maximum bore 6⅝-in.) and larger couplings can be made to order. Modified types are also available for up to 14 degrees total misalignment. Made by **Philadelphia Gear Works,** Erie Ave. & G St., Philadelphia 34, Pa.

For more details circle NED-782 K4 on enclosed inquiry slip

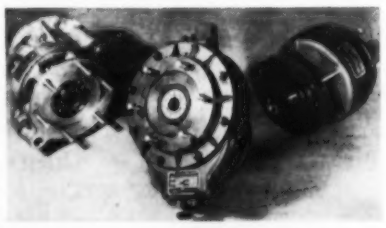
MINIATURE RELAY
handles low voltage and current



Reliable switching of extremely low voltage and low current is assured with series 22 miniature relays which feature twin contacts. Flexibility of the long contact springs enables twin points to make contact independently. Thus, one point will make contact even when other is blocked by dust or grit. Series 22 relays are available for alternating or direct current, in open types, as well as with hermetically sealed and dust-tight enclosures. Made by **Magnecraft Electric Co.,** 1442-G W. Van Buren St., Chicago 7, Ill.

For more details circle NED-783 K4 on enclosed inquiry slip

ACCESSORY DRIVE UNITS
for aircraft application



Designed to operate over a temperature range from −65 to 200° F, illustrated accessory drive units are suitable for aircraft application. Each of the drives employs a different type of lubrication system. One is self-contained, another is engine lubricated and the third is lubricated by hydraulic fluid. Shown left to right, units are model 1676E2, an alternator drive gear box; 1604E35, a hydraulic pump drive, and 1651E130, a hydraulic pump adaptor. Respective ratings are 48 hp at 7350 rpm input and 3278 rpm output, 46 hp at 6900 rpm input and 4025 rpm output and 35 hp at 6000 rpm input and 6220 rpm output. Made by **Western Gear Works,** P. O. Box 182 A, Lynwood, Calif.

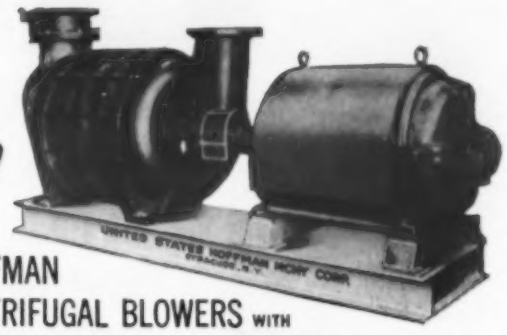
For more details circle NED-784 K4 on enclosed inquiry slip

HOLE GAGE
measures 0.020 to 0.130-in. holes

Internal diameters of small holes ranging from 0.020 to 0.130-in. are quickly measured by the Kwik-Chek direct-reading hole gage which is accurate to within 0.0005-in. over entire range. Operation is similar to that of a ball-point pen or automatic pencil. Scale is graduated in thousandths of an inch and has built-in 2½X crystal magnifier which enables readings to nearest half-thousandth. Gage is furnished with lined leather case which also contains machined steel setting gage. Made by **U. S. Expansion Bolt Co.,** New Standard Div., 620 State St., York, Pa.

For more details circle NED-785 K4 on enclosed inquiry slip

now



HOFFMAN CENTRIFUGAL BLOWERS WITH QUICK DELIVERY AND LOW COST

New assembly procedure on the Hoffman Multi-stage Centrifugal Blowers—throughout the entire volume range of 2000 to 9000 CFM—now assures delivery in a fraction of the time usually required in building such "custom" equipment.

Interchangeable impellers are assembled into standard frame units to produce the blower-exhauster of the desired capacity. All blowers turn up pressure as high as 9 lbs./sq. inch, or vacuum up to 12 inches mercury.

This new "standardized production" procedure not only cuts delivery time on the blower, but slashes cost from ½ to ⅔ of the former figure for custom-built equipment. These blowers-exhausters work on the same unique principles of no gears, pistons, rollers, valves, or other wearing parts . . . having a one-piece impeller assembly as the sole moving part. These units operate non-stop over long periods, with no adjusting, almost no maintenance required. *Write for full information.*

AIR APPLIANCE DIVISION

U.S. HOFFMAN MACHINERY CORPORATION

Dept NED, 105 FOURTH AVENUE • NEW YORK 3, N. Y.

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Now in its 6th year

NOPAK Shelf-Stock Service . . .

based on these 2 Standard Mounting, Class 1, Cushioned Cylinders

LIST PRICES F.O.B. Milwaukee, Wisconsin — Subject to Revision.

Cyl. Dia. Bore	STOCK STROKE LENGTHS — All Double Acting								
	1"	2"	3"	4"	6"	8"	10"	12"	15"
1½"	24.16	25.72	26.08	26.44	27.16	27.88	28.60	29.32	30.40
2"	26.24	27.88	28.32	28.76	29.64	30.52	31.40	32.28	33.60
2½"	32.36	34.12	34.68	35.24	36.36	37.48	38.60	39.72	41.40
3"	35.04	37.28	37.92	38.56	39.84	41.12	42.40	43.68	45.60
4"	40.84	43.68	44.52	45.36	47.04	48.72	50.40	52.08	54.60
4½"	48.96	51.92	52.88	53.84	55.76	57.68	59.60	61.52	64.40
6"	66.60	70.80	72.20	73.60	76.40	79.20	82.00	84.80	89.00
8"	.....	126.80	129.20	131.60	136.40	141.20	146.00	150.80	158.00

By specifying NOPAK Shelf-stock, you buy *quality cylinders* at lowest prevailing prices, you *eliminate waiting* for "specials", reduce engineering costs. Compare the prices and scope of NOPAK Shelf-stock (1½ x 1" to 8 x 15") with competitive offerings — and you *will specify* NOPAK.

● Basic mountings "A" or "E" convertible to "B", "C", "D" or "F", (see below) by changing cylinder heads. Add 10% to above prices (no extra charge 8" bore). ● Piston Rods NF male thread. ● Cushioning can be eliminated on rod, blank or both ends by removing spring and ball-check.

NOPAK 4-Way Valves, hand, foot, solenoid, or pilot operated, to actuate all cylinders, *also in Shelf-stock.*

GALLAND-HENNING NOPAK
2755 SOUTH 31st STREET
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NOPAK VALVES AND CYLINDERS

DESIGNED for AIR and HYDRAULIC SERVICE

TEAR OUT THIS AD for Reference — or write for extra copies.

A 8003-½-R

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NEW STAINLESS STEEL FINISH FOR YOUR PRODUCT

Steelcote STAINLESS STEEL COATING

Defies acids, alkali, chemicals, oil, grease, salt air and water, heat, cold, sunlight and abrasion.

Non-inflammable, non-toxic when dry. Film is extremely tough, durable and flexible. No more chipping.

May be sprayed, brushed or dipped. Dries quickly. Does not discolor.

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For complete information, write Dept. 12
IN CANADA: Steelcote Mfg. Co. of Canada, Ltd., Rodney, Ont.

STEELCOTE MFG. CO. • 3418 GRATIOT • ST. LOUIS 3, MO.

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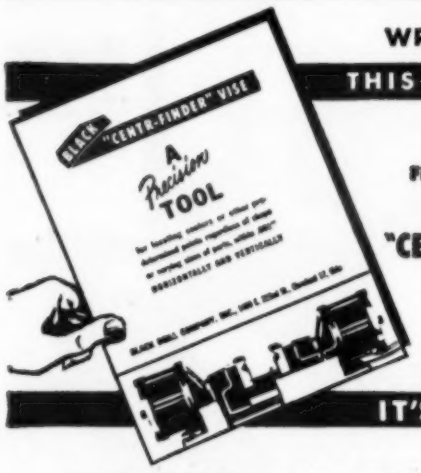

FEATURING THE BLACK "CENTR-FINDER" VISE

IT'S FREE

● Filled with practical information on this precision tool that locates centers within .001" vertically and horizontally—locates pre-determined points regardless of shape or varying sizes of parts. Tells how it operates—illustrates the vise in use on drilling and boring operations on non-symmetrical work. The facts in this booklet will show you how to cut costs on drilling, chamfering, hollow milling, deburring, reaming, tube flaring, and many other production operations.

Write today for your copy.

THE BLACK DRILL COMPANY, INC.
1380 East 222nd Street • Cleveland 17, Ohio

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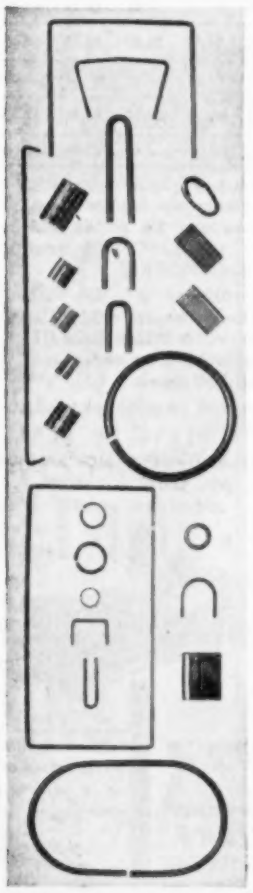

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SOLDER PREFORMS

precision-made on high speed machines!

Art Wire's high-speed, precision production of pre-shaped forms in hard or soft solders means substantial savings — in initial cost, and on your production line. Precision-made to every specification, including Military and Federal — in shapes to meet the requirements of your induction soldering. Eliminate variability in soldering, insure sounder, stronger joints with Art Wire Solder Preforms.

Write for illustrated folder. Send blueprints or samples for estimate.

ART WIRE & STAMPING CO.
15 Boyden Place, Newark, N. J.

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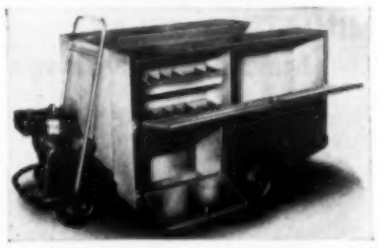
WASTE RECEPTACLE
top opens from any direction

One piece outer shell of the Solar Jet waste receptacle has a white baked enamel finish. Self-closing stainless steel dome swings freely inside the outer shell in any direction, making waste disposal possible from any direction. Inner galvanized steel container is 7/8-in. off floor or ground. Receptacle is made in 30½ and 36-in. heights, both 15 in. diameter. Made by **Pressed Steel Car Co.**, Solar-Sturges Mfg. Div., Dept. 10-H, Melrose Park, Ill.

For more details circle NED-791 K4 on enclosed inquiry slip

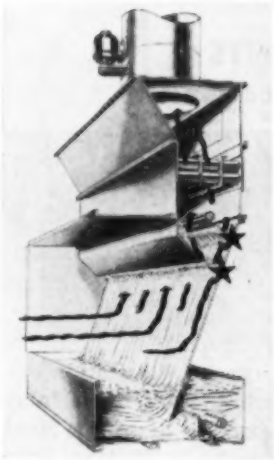
MOBILE WORKSHOP
is self-propelled industrial unit



Maintenance tools, supplies, parts and equipment can be carried right to the job easily with this Shopmobile self-propelled workshop. Power is supplied by 1½-hp Briggs & Stratton gasoline engine. Steering handle actuates clutch and applies parking brake, depending upon position. Side compartments accommodate up to 800 lb of equipment. Work bench surface of checkered steel can be fitted with vises or tools. Price is $397.50. Made by **Stahl Metal Products, Inc.**, 3498 W. 140th St., Cleveland 11, O.

For more details circle NED-792 K4 on enclosed inquiry slip

SPRAY PAINTING BOOTH
overspray and fumes are drawn through two washing operations

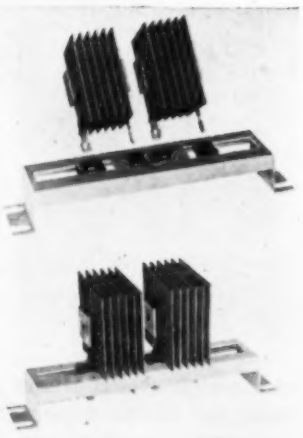


Overspray and fumes from painting operations are drawn through two separate washing operations in style D water wash spray painting booth. Velocity of air passing through wash chamber never exceeds 600 fpm in order to utilize full efficiency of water action. Circulating pump forces water from base collecting pan through clogproof manifold which sprays it in two directions in an unbroken curtain. Excess water passes manifold and returns to pan.

Pan, which acts as reservoir for pump and as collection place for vehicle and pigments, is divided into two chambers by removable divided plate. This plate traps most of the pigments in front section for easy reclamation. Booths are furnished in standard sizes from 4 to 20 ft in width and 7 to 12 ft in height. Provision exists for conveyor system. Made by **Binks Mfg. Co.**, Dept. NED, 3122 Carroll Ave., Chicago 12, Ill.

For more details circle NED-793 K4 on enclosed inquiry slip

CONVERSION CHASSIS
for plug-in rectifiers



Future replacement of rectifiers is simplified through use of this simple conversion chassis for plug-in selenium rectifiers. When incorporated into electronic equipment, it will allow use of the plug-in units and thereby eliminate need for removing the chassis and soldering. Made by **Sarkes Tarzian, Inc.**, Dept. N, 415 N. College Ave., Bloomington, Ind.

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SAFETY wheel blocks and chocks STOP ACCIDENTS!

Model WB-2 —for holding parked trucks, trailers, compressors, drill rigs safely spotted.

Model WC-1—Retractable wheel chock—designed for active use at loading docks

Model WB-4—Extra heavy duty; widely used by tow truck operators, etc.

Model WB-3—Designed for Public Utility maintenance trucks. Compact, easily stored.

Casteel Safety Wheel Blocks and Chocks are made of 80,000 lb. per sq. in. tensile strength alloy steel — have wide, curved tread plates for maximum tire contact. Ruggedly designed and built for hard use, they will never wear out. Broad base provides safe, sure holding . . . Cast-in gripper teeth hold even on ice or snow. Write for complete details and illustrated circulars.

CALUMET STEEL CASTINGS CORP.
1648 Summer Street • Hammond, Indiana

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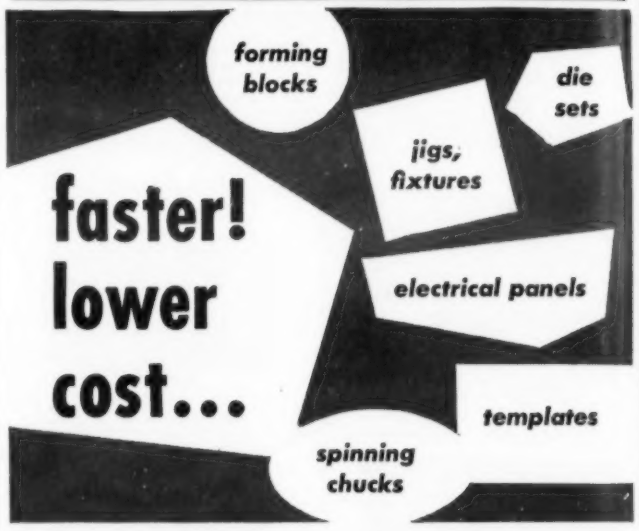

with MASONITE BENELEX® "70"

Easy to cut and shape these dense, but lightweight panels. 4′ wide—3′, 6′ and 12′ lengths. Thicknesses from ¼″ to 2″. Write for fact-filled brochure.

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PRESDWOOD WOOD MADE BETTER
MASONITE® CORPORATION
Dept. NED-10, Box 777, Chicago 90, Ill.

"Masonite" signifies that Masonite Corporation is the source of the product

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Is this the way your plant gets its MAKE-UP AIR?

IF SO, YOU NEED WING FRESH AIR SUPPLY HEATERS

Air exhausted from plant operations must be replaced. If no other means are used, it rushes back through open doors or windows, seeps in cracks and crevices interfering with the efficient operation of your exhaust fans and heating system.

WING FRESH AIR SUPPLY HEATERS furnish make-up air properly heated. Require no expensive duct work. Cannot freeze, because full steam pressure is always on.

Write for complete information

L. J. Wing Mfg. Co. 165 Vreeland Mills Rd., Linden, N.J.

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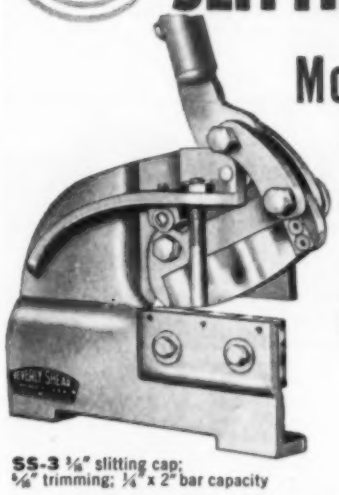
NEW Beverly SLITTING SHEAR



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Exclusive Design Cleaner Cuts

Ruggedly Built last a lifetime

Capacities to 3/16"

SS-3 1/8" slitting cap; 5/8" trimming; 1/4" x 2" bar capacity

Get faster, easier slitting and trimming with a new design Beverly "SS" Series Slitting Shear. Rigid, strongly braced frame; compounded linkage and extra strength where needed. Many exclusive features. Write for FREE illustrated Bulletin.

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Beverly SHEAR MFG. CO.

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ROTO FINISH

develops a new approach to MECHANICAL SURFACE FINISHING

ROTO-FINISH has now extended the original barrel finishing process to include entirely new special fixture machines and equipment. These machines represent a radically new departure from the generally accepted conception of barrel finishing machines, made possible only by Roto-Finish extensive experimental facilities and long experience with modern, precision surface finishing processes. And these new special fixture machines prove that there are no limits to the size or shape of parts which can be successfully processed with proper equipment, materials and methods.

The new engineering developments which have taken place in the Roto-Finish laboratories open the door wide to entirely new applications and entirely new principles in mechanical surface finishing. Therefore, whatever your finishing problem, we urge you to ship us two finished and several unfinished samples of parts you may wish to have us process in our laboratories. Remember, Roto-Finish guarantees the same result in your shop, as on the samples processed in their laboratories.

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Fielden ELECTRONIC TEMPERATURE CONTROL

- High Sensitivity (± 0.2° F.)
- Wide range (—200°C. to +500°C.)
- Low first cost, low operating cost
- On-Off or 2 Zone Control

The new Fielden Electronic Temperature Control is a simplified, low cost instrument with high sensitivity—an ideal controller in many industrial fields. This control can be employed for numerous tanks, vats, ovens, kilns, or dryers, in conjunction with electric, steam, or hot water heaters using solenoid, pneumatic, or electric motorized valves. Available in a wide selection of ranges, with either platinum or nickel bulbs. Aside from the many industrial uses, this control has proved very successful in the laboratory for low cost, reliable and accurate control of test chambers, water baths, and similar applications. Write today for complete information.

Robertshaw-Fulton CONTROLS COMPANY

FIELDEN INSTRUMENT DIVISION

2920 N. 4th St., Dept. F, Philadelphia 33, Pa.

▲ For more details circle NED-800 K4 on enclosed inquiry slip ▲

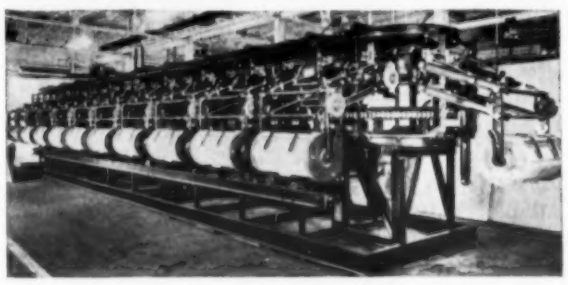
GLASS-PLASTIC LAMINATE made in 1/16 to 1½-in. thicknesses

High heat stability, impact strength and arc resistance and low moisture absorption are features of grade TS Glastic, a glass fiber-polyester laminate. It can be used in mounting panels, terminal strips, barriers, bus supports and other insulating or physical supporting parts in transformers, motors, controls, switch gear and appliances. Holes can be punched close to its edges, and it can be sheared in narrow strips without preheating. Material is stocked in 1/16 to ½-in. thicknesses in sheets measuring 24 x 36 and 36 x 72 in. It can be made in thicknesses through 1½ in. Made by **Glastic Corp.**, E. 40th St. near Hough, Cleveland 3, O.

▲ For more details circle NED-801 K4 on enclosed inquiry slip ▲

PLATING BARREL CONVEYOR automatic 24-barrel unit produces up to 6000 lb of plated work per hour

This fully automatic plating barrel conveyor is a heavy duty, high production machine. It incorporates 24 cylinders, 14 in. diameter by 30 in. long, and will



produce from 3000 to 6000 lb of plated work per hour. Though laid out for the normal zinc plating cycle, this machine can be built for any standard plating process.

Flexibility is obtained with timer controlled speed and power operated skip transfers. Any desired plating cycle can be selected. Cylinders revolve in a trough of anodes which are on both sides. Cylinders rotate while raising and lowering to minimize drag-out. A power-operated hopper with a weighing scale is used for loading the machine, which is designed for ease of accessibility and operation.

Cylinders of Tempron or acrylic resin are available and are easily removed from the machine. Made by **Udylite Corp.**, Dept. NED, 1651 E. Grand Blvd., Detroit 11, Mich.

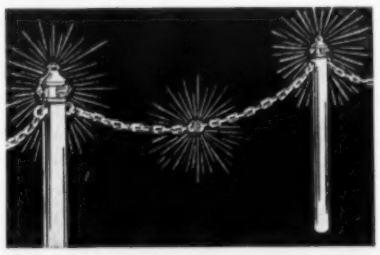
▲ For more details circle NED-802 K4 on enclosed inquiry slip ▲

SANITARY FAUCET corrosion resistant and fume-tight

Positive shutoff of this sanitary faucet is assured by automatic closing or, with a simple adjustment, by manual operation. Stainless steel or chromium plated brass units are corrosion resistant and fume-tight. Chemically inert Kel-F O-rings withstand steam sterilization and special cleaning operations. Made by **Economy Faucet Co.**, Dept. NED, 12 New York Ave., Newark 1, N. J.

▲ For more details circle NED-803 K4 on enclosed inquiry slip ▲

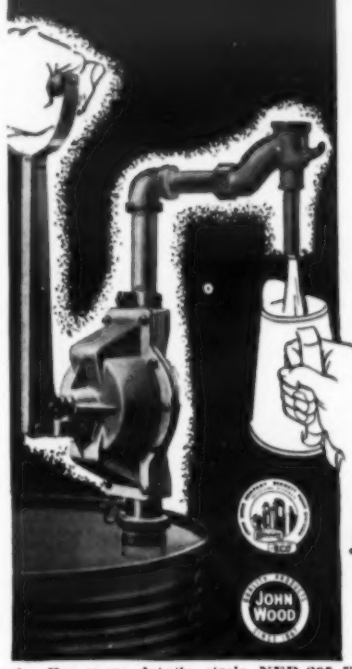
ALUMINUM CHAIN has jeweled reflectors



When used along driveways, jeweled reflectors attached to aluminum chain show up for considerable distances in headlights of an approaching automobile or truck. Reflectors can be amber, red or green. Chain is available in various sizes in aluminum finish and will be available soon in satin, orange, yellow, blue, red or green finishes. Made by **Aluminum Chain Corp.**, Genesee Bldg., Buffalo 2, N. Y.

▲ For more details circle NED-804 K4 on enclosed inquiry slip ▲

ELIMINATE WASTE— MESS—HAZARD!



Pump it with NEW Bennett BIG "G"

DOUBLE ACTION PUMPS

For gasoline, lubricating oil, anti-freeze, turpentine, cutting oil and various solvents. Special models furnished with hose or spout, allow transfer of many other industrial liquids. *Let us know your liquid handling problems.*

JOHN WOOD COMPANY

Bennett Pump Division

Muskegon, Michigan

Offices in Principal Cities

▲ For more details circle NED-805 K4 on enclosed inquiry slip ▲

LET US ADAPT— DPS MODERN ASSEMBLING EQUIPMENT to Your Individual Needs

DPS POWER SCREWDRIVERS and SELECTIVE PARTS FEEDERS will give you outstanding performance: greatly stepped-up assembly speed, lower costs, accuracy and uniform results.

Below—a very small portion of the more than 10,000 Applications we have done for others. We can do the same for You!

WRITE FOR NEW CATALOG AND BROCHURES

DETROIT POWER SCREWDRIVER CO.

2819 W. FORT ST. DETROIT 16, MICH.

▲ For more details circle NED-806 K4 on enclosed inquiry slip ▲

REMEMBER THE NAME . . . Rubyfluid

the easy-to-use Soldering Flux for neat, strong unions.

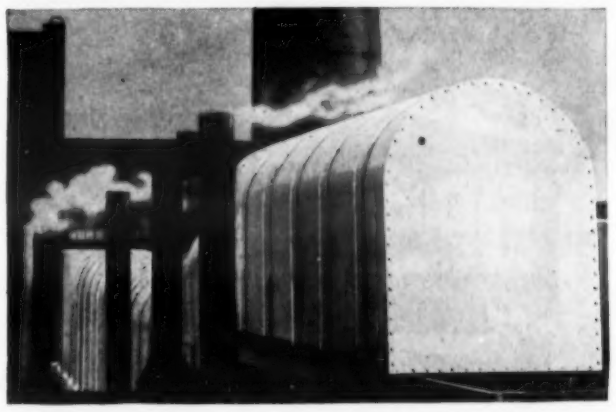
Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

For Stainless Steel use *Ruby's Stainless Steel Flux*, perfected for that metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle NED-807 K4 on enclosed inquiry slip ▲



Boiler breeching, Southland Paper Mills, Inc., Lufkin, Texas.
Aluminum Paint: High Heat Aluminum, Napko Paint & Varnish, Houston, Texas.

One coat of ALUMINUM PAINT protects exposed boiler breeching for more than 20 months!

Painted with *one coat* of aluminum paint, this boiler breeching had been subjected to atmospheric exposure for twenty months when the photo was taken. The paint was in excellent condition, good for many more months of protection. An application such as this, where most paints fail within six months, is an outstanding testimonial to the remarkable service life you can expect from the *right* aluminum paint.

Alcoa does not make paint . . . but ALCOA Aluminum Pigments are used in *more* aluminum paints than any other brand. ALCOA's co-operation with paint manufacturers has made possible many special formulas designed to solve your toughest problem. Aluminum paint offers the utmost in brightness and protection.

Ask your paint supplier about specially formulated aluminum paints—or tell us your problems. We'll gladly recommend the correct type of aluminum paint for your job.

Send coupon for FREE BOOKLET, *Painting with Aluminum*
Aluminum Company of America, Paint Service Bureau
1788-K Alcoa Building, Pittsburgh 19, Pa.

Name_____
Company_____
Address_____
City_____ Zone____ State_____

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

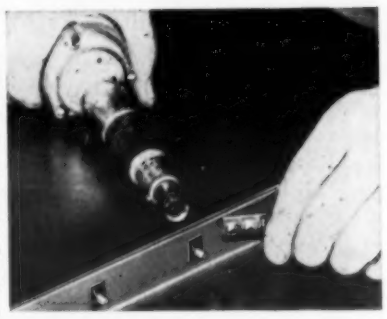
▲ For more details circle NED-808 K4 on enclosed inquiry slip ▲

OFFICE COPYING MACHINE
handles 8½ x 14-in. documents

"Legal model" Verifax printer utilizes same basic principle as the smaller unit (*NED—April '53*), differing mainly in its ability to handle larger-size originals. It will copy documents up to 8½ x 14 in. Machine can be used on any desk and table under existing light conditions. Rate of production is about three copies per minute. Paper compartments, removable for easy loading, hold 100 sheets each. Supplementary reservoir keeps activator solution fresh and at proper level. Electrical timer for exposure and activating, provision for handling oversize originals and independent print paper feed are other features. UL approved unit operates from standard 110-v power source. Made by **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

▲ For more details circle NED-809 K4 on enclosed inquiry slip ▲

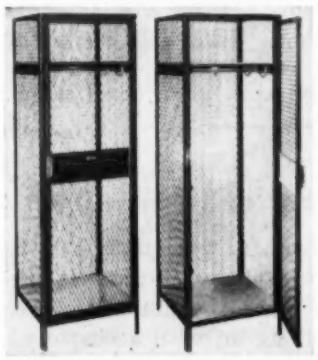
SPRING TENSION FASTENERS
ganged in strips to speed assembly



Improved Tandem-Type Speed Nuts, previously described (*NED — Sept. '49*) are interchangeable for No. 6-8-10 and 14Z screws. They were originally available only for size 10-24 screws. Fasteners are produced in coil or strip form with a partial shear between each nut. In assembly, operator positions the end fastener and power-drives a screw. Slight pressure then snaps secured fastener from the strip. Complete operation can be accomplished in less than 3 seconds. Made by **Tinnerman Products, Inc.**, Dept. 14, P. O. Box 6688, Cleveland 1, O.

▲ For more details circle NED-810 K4 on enclosed inquiry slip ▲

INDUSTRIAL LOCKER
open mesh gives full ventilation

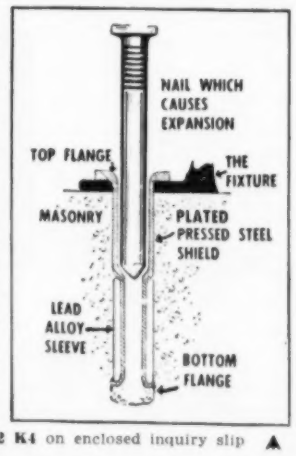


Clothes are kept fresh, dry and sanitary when stored in Air-Lite locker. Expanded steel sides, back and door are of 14-gage metal, with ¾-in. diamond shaped openings. Locker construction is pilfer-proof, but permits visual inspection of contents at all times. Fifteen single and 10 double tier sizes are available, finished in electrostatically-sprayed green or gray baked enamel. Coat hooks, number plates and chrome handles are furnished, and choice of locks is available. Made by **Penn Metal Corp. of Penna.**, 50 Oregon Ave., Philadelphia 48, Pa.

▲ For more details circle NED-811 K4 on enclosed inquiry slip ▲

FASTENER FOR MASONRY
uses nails for expansion and locking

Designed for attaching various fixtures to masonry or concrete, Dryvin expansion shield is installed using only drill and hammer. Single or double head nails supplied with the fastener are driven by hammer, forcing ductile shield into the sides of hole drilled in masonry and locking the anchor flange. Load is taken by top flange of shield rather than by the nail. Vibration-proof fastener is available in 16 different shield sizes from 3/16 x ⅞ to ½ x 3½-in. Made by **Star Expansion Bolt Co.**, Dept. N, 147 Cedar St., New York 6, N. Y.



▲ For more details circle NED-812 K4 on enclosed inquiry slip ▲

"We Consider DY-NAMIC BALANCING absolutely necessary for HIGH SPEED Rotating Parts"
says G. Selig, vice-president and plant manager of Remsel Industries, Chicago, Illinois, where this "Bear" Dy-Namic Balancing Machine is used to balance impellers.

The need for Dy-Namically Balancing every rotating part—especially those that spin at high speeds—is being recognized in every phase of industry. Select the "Bear" Machine that fits your budget and your operation from the . . .

free DY-NAMIC BALANCING MANUAL!

Tells how you can easily, quickly, economically balance rotors, armatures, crankshafts, and any other part that turns, weighing from 4 oz. to 8 tons! See how to reduce wear, eliminate noise and vibration, improve all-around performance of finished product. Your copy sent without cost or obligation. Bear Mfg. Co., Dept. N-5, Rock Island, Ill.

6038

"BEAR"
STATIC AND DY-NAMIC BALANCING MACHINES
balance rotating parts weighing from 4 oz. to 8 tons

▲ For more details circle NED-813 K4 on enclosed inquiry slip ▲

CAPCO DOCK COVERS GIVE YEAR 'ROUND PROTECTION

CAPCO Dock Covers completely enclose the space between car and building doorways protecting loading and unloading during bad weather . . . preventing accidents . . . insuring against loss of heat or refrigeration. 51 different models in any size for every loading problem.

CAPCO

Write for literature and name of nearest distributor.

622-24 PROSPECT AVENUE • KANSAS CITY 24, MISSOURI

▲ For more details circle NED-814 K4 on enclosed inquiry slip ▲

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

See Tri-Saw at your jobber or write us for descriptive literature

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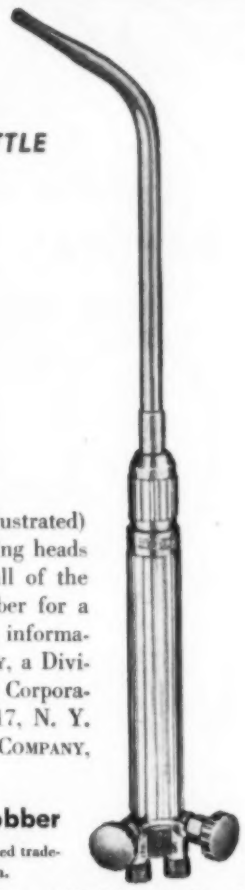
2207 HANLEY INDUSTRIAL COURT • ST. LOUIS 17, MISSOURI

▲ For more details circle NED-815 K4 on enclosed inquiry slip ▲

HERE'S WHY

PUROX
Trade Mark

BLOWPIPES COST SO LITTLE TO USE AND MAINTAIN



SELF-SEATING VALVES
Reseat scored valves when turned tight.

RUGGED HANDLE ASSEMBLY
Built for long, trouble-free service.

SLIP-FIT "O" RINGS
Perfect gas seals every time.

MIXER IN EACH HEAD
Resists backfires, eliminates burnouts.

SWAGED, PURE COPPER TIPS
Heads snap in handle. No wrench needed.

The Purox W-202 blowpipe (illustrated) is available with 13 standard welding heads and 3 multiflame heating heads, all of the snap-in type. Ask your LINDE jobber for a demonstration or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 E. 42nd St., New York 17, N. Y. In Canada: DOMINION OXYGEN COMPANY, Toronto.

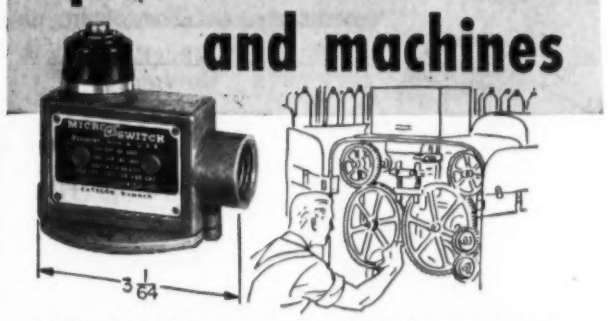
get it from your LINDE jobber

The terms "Purox" and "Linde" are registered trademarks of Union Carbide and Carbon Corporation.

▲ For more details circle NED-816 K4 on enclosed inquiry slip ▲

MICRO SWITCH Precision Switches
A PRINCIPLE OF GOOD DESIGN

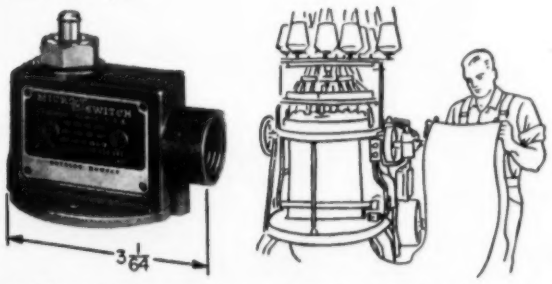
Plants find profits in MICRO SWITCH protection for men and machines



• Plugging of danger sources—both for operators and machines—with MICRO SWITCH precision switches is common practice of progressive plant operators.

This employee can't get his fingers caught in the gears. The MICRO SWITCH precision switch turns off the power when he opens the door.

But safety is only one way MICRO SWITCH products contribute to more production from present machinery. Used as limits and interlocks, they make all kinds of machines more automatic and efficient. Stocks of switches are available at the MICRO SWITCH distributor near you.



• Thread breakage on a knitting machine can be expensive. R. E. Miller, plant superintendent of the E-Z Mills at Carterville, Ga., figures two of these MICRO SWITCH precision switches are saving him $50 a year per machine. He installs them to replace stop motions and mechanical stops that often failed when thread breakage occurred.

Like Mr. Miller, hundreds of plant operators are saving important money by the use of MICRO SWITCH products to make equipment more automatic, safer and more productive.

Purchase these switches from the MICRO SWITCH distributor in your town. For technical information contact the field engineer at your nearest MICRO SWITCH branch office.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
FREEPORT, ILLINOIS

▲ For more details circle NED-817 K4 on enclosed inquiry slip ▲

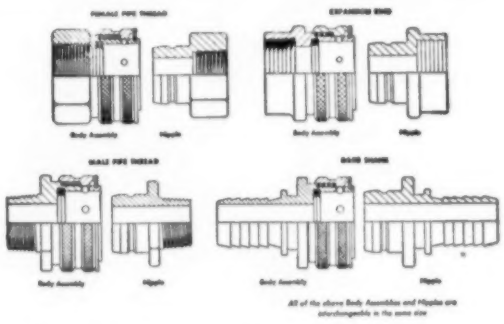
CARTON TRUCK
handles all carton types and sizes

A wide range of carton sizes is handled without adjustment by model CC carton truck. Unit can be quickly adjusted for oversize loads and is also suitable for use with wooden boxes. Cartons are loaded by pushing tapered feet under them, dropping breakover hook and tilting cart to balance and push position. Cart is of steel construction and is available with 4, 5, or 6-in. diameter rubber or semisteel roller bearing wheels. It is available in various widths and stores compactly in upright position when not in use. Made by **Sabin Machine Co.**, 6538 Carnegie Ave., Cleveland 3, O.

▲ For more details circle NED-818 K4 on enclosed inquiry slip ▲

HOSE COUPLING
quick-seal type for heavy duty

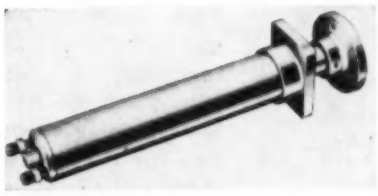
Quick-seal leak-proof coupling is now available in heavy-duty models for high pressure heavy flow applications. Full-swiveling coupling will not kink hose



and seals tighter as line pressure is increased. Coupling is available in female and male pipe thread, expansion ring or barb shank styles as illustrated. Size range includes eight standard sizes from ¼ to 2 in. and ten sizes from 2½ to 12 in. available on special order. Standard materials are cadmium plated steel with Neoprene and Buna-N seals. Aluminum, brass, stainless steel and other alloys can also be used. Couplings have heat-treated bearing surfaces and stainless steel springs and ball bearings. Made by **Titeflex, Inc.**, 548 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle NED-819 K4 on enclosed inquiry slip ▲

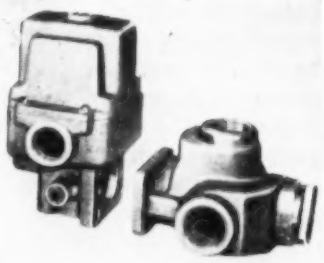
AIR CYLINDER
has keyed linear motion



A double - acting nonrotating shaft that provides perfect registration on each stroke without exterior guides is incorporated in this air cylinder. Unit is useful in positioning work for welding, painting, machining, assembly, or where one or more pressure points are required which are not on the cylinder axis. Both ports are at rear of cylinder. Shaft has ⅞-in. diameter at working end and is available with 4-in. flange or with clevis. The 2-in. bore cylinder is made with 1 to 6-in. strokes. Other bores and strokes can be obtained. Made by **Summit Tool & Mfg. Co.**, Toledo, O.

▲ For more details circle NED-820 K4 on enclosed inquiry slip ▲

AIR-CONTROL VALVES
operate effectively down to 5 psi



Fully enclosed solenoid, efficient operation down to 5 psi and a throttled exhaust for speed control are features of in-line air-control valves. Line consists of 47 models with pipe sizes ranging from ¼ to 1 in., comprising both two and three-way actions, solenoid and remote pilot actuation, line-mounted and foot-mounted. All models comply with JIC standards. Solenoid and remote pilot heads are interchangeable on main valve assembly. Made by **Numatics**, 825 Commerce Rd., Milford, Mich.

▲ For more details circle NED-821 K4 on enclosed inquiry slip ▲

"TOOL UP"
for your cleaning jobs
PREVENT FIRES

You'll find a new source of savings and profits, plus greater plant safety, when you "tool up" for cleaning jobs with Hypressure Jenny Steam Cleaner. Jenny removes grease, cutting oils, and protective coatings from machinery, equipment, sub-assemblies, and castings, before repair, repainting or machining—ten times faster than by ordinary methods! It promotes safety by eliminating the fire hazard of greasy conveyor chains and floors, and the use of inflammable cleaning solvents. It cleans ribbed glass windows; keeps floors and runways free of dirt and grease for safer, faster plant traffic, and often reveals damaged or worn parts for repair before production delays or breakdowns occur. Jenny does most any cleaning job for one-tenth the cost of cleaning by hand. So find out how easy it is to bring these savings and safety to your plant.

Send for Catalog today for full facts.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"
P.O. BOX 84 CORAOPOLIS, PA.

▲ For more details circle NED-822 K4 on enclosed inquiry slip ▲

NOBODY but NOBODY...

CAN GIVE YOU FINER
PRECISION MADE
Multiple Spindle
DRILL HEADS

Root fixed center drill heads, for medium to heavy work, are custom engineered, and delivery prompt. Experience has proved their unsurpassed quality, so why buy less than the best when Root costs no more.

Get all the facts — write today, no obligation.

B. M. ROOT CO.
YORK — PENNA.

▲ For more details circle NED-823 K4 on enclosed inquiry slip ▲

$200 price reduction
ON EMERY CS-10 CRANE SCALE

Increased production makes a new low price on the Emery CS-10 Crane Scale . . . the best in its field . . . now only $995.

The Emery CS-10 Crane Scale provides . . .
- ✔ weighing up to 10,000 lbs. *in transit.*
- ✔ only 19⅛ in. headroom required.
- ✔ guaranteed accuracy ±0.2%.
- ✔ no knife edges, no sticky seals, no wear.
- ✔ rugged industrial-type construction.
- ✔ big 21½ in. unbreakable dial for easy reading.

Order your Emery CS-10 Crane Scale at the new low price. Send for information today.

THE A. H. EMERY CO. NEW CANAAN 6, CONNECTICUT

Please send me descriptive bulletin No. 541.
NAME _____
POSITION _____
Attach to, or write on, your company letterhead.

▲ For more details circle NED-824 K4 on enclosed inquiry slip ▲

Here's how to get the most for your floor dollar...

Write to the Flash-Stone Company 3723 Pulaski Avenue, Philadelphia 44, Pennsylvania, for the new analysis of initial floor costs compared to years of service. Covers four flooring materials.

▲ For more details circle **NED-825 K4** on enclosed inquiry slip ▲

SIMPLICITY AND INGENUITY have made

American STORAGE RACKS

First Choice

here's an exclusive American feature

American Tubular Storage Racks are designed to meet practically every storage need. They are used in every type of business, large and small. Get the facts on American Racks before you decide on any type rack. Send for catalogue.

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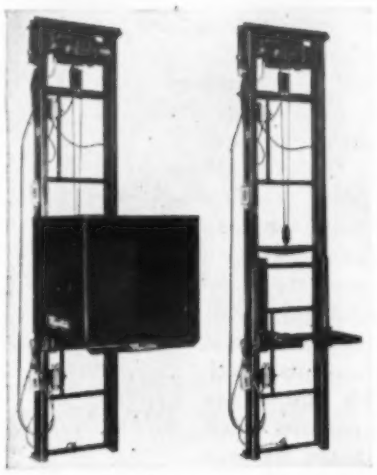
AMERICAN METAL PRODUCTS CO.

STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

▲ For more details circle **NED-826 K4** on enclosed inquiry slip ▲

PLATFORM TYPE LIFT
with 250 or 500-lb capacity



Goods can be moved vertically between floors or between levels of a gravity or power conveyor system by the redesigned Rapistan VL vertical lift electric platform hoist. Furnished as a complete package for installation by the customer, it is available with choice of lift speeds with either 250 or 500-lb capacity. Electric hoist at top is totally enclosed and equipped with limit switches. Carriage travel can be up to 20 ft. Platform or cab travel limits are adjusted by positioning micro switches on the carriage frame. Made by **Rapids-Standard Co.**, Dept. VL, 342 Rapistan Bldg., Grand Rapids 2, Mich.

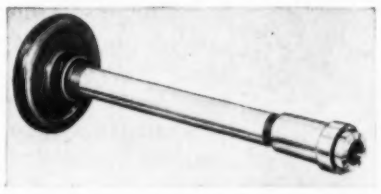
▲ For more details circle **NED-827 K4** on enclosed inquiry slip ▲

FLOCK TAPE
has suede-like fiber backing

Protective as well as decorative applications are possible with Scotch flock tape which features an untreated suede-like fiber backing coated with pressure - sensitive adhesive. Easily - removed paper liner protects adhesive. Immediate uses are as bottoms or bumpers on small appliances, clocks, boxes, pots, desk sets and other pieces which are placed on highly finished table or desk surfaces; as lining material inside instrument boxes; back-up stripping in printing work; or as decorative trim on a wide variety of items. The 16-mil thick tape is offered in ½-in. by 3-yd red or green sample rolls and in ½ to 26-in. widths on 36-yd rolls in 18 colors. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

▲ For more details circle **NED-828 K4** on enclosed inquiry slip ▲

DIVIDING HEAD ATTACHMENTS
take ¾-in. and ⅝-in. collets



This draw-in bar and collet sleeve attachment is designed for use with L-W dividing heads. One for 11-in. model BP and AU heads takes up to ¾-in. round standard type 2L collet. Other for use with 6½-in. model SD head handles up to ⅝-in. round standard type 4 NS collet. Made by **L-W Chuck Co.**, 51 S. St. Clair St., Toledo 4, O.

▲ For more details circle **NED-829 K4** on enclosed inquiry slip ▲

PLASTIC PIPE
resists deterioration by sunlight

Polyethylene - base, flexible plastic pipe is nontoxic, noncontaminating and will withstand deterioration by sunlight. Pipe is practical in buried as well as above-grade installation in all types of industrial, chemical and food processing applications. The ¾-in. size is recommended for continuous working pressures up to 176 psi at 75° F. Pipe can be used to convey potable liquids, slurries and chemicals and is also suitable for electrical conduit. It will bend around most obstacles without kinking. A 100-ft length of ¾-in. pipe weighs only 13 lb. Nine sizes up to 6-in. diameter are available as well as complete line of fittings. Continuous coils up to 400 ft can be shipped. Made by **Munray Products, Inc.**, 12401 Crossburn Ave., Cleveland 11, O.

▲ For more details circle **NED-830 K4** on enclosed inquiry slip ▲

Flexible

Improved New VARGLAS SILICONE Tubing and Sleeving

Now Varglas Silicone has been made more flexible. Sharp turns and 90° bends cause no cracking or peeling — no loss of dielectric strength.
As pioneers in the manufacture of silicone sleeving and tubing, we know this is the greatest improvement made during the past ten years. Unexcelled where high temperatures must be withstood for several hours — not just for 15 minutes. You need not sacrifice abrasion resistance and toughness to get flexibility. The new Varglas Silicone sleeving and tubing will pass cold bend tests at 35° to 40° LOWER temperature than formerly.

The only Class H insulation with all these features:

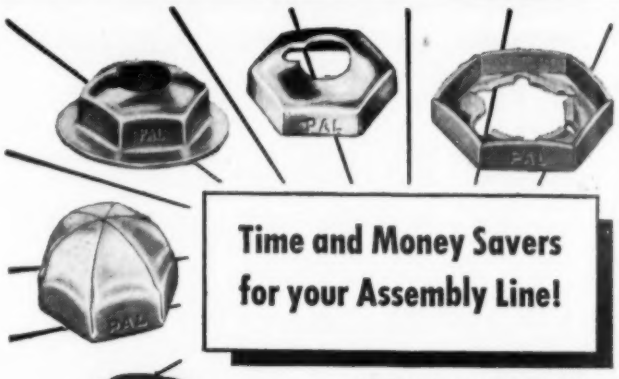
Efficient from 500° F. to — 85° F.
Moisture and Fungus Resistant
Flame Resistant — Self extinguishing
Abrasion Resistant
Dielectrically Strong with average readings up to 7,000 volts.
Available in 10 colors — at no extra cost.

Samples of Varglas Silicone products as well as samples of our complete line of tubing and sleeving are available in a convenient sample folder. Just drop us a line telling us your problem and its peculiarities.

Varflex CORPORATION
Makers of Electrical Insulating Tubing and Sleeving

VARFLEX *Sales Co., Inc.*
310 N. Jay St., Rome, N. Y.

▲ For more details circle **NED-831 K4** on enclosed inquiry slip ▲



Time and Money Savers for your Assembly Line!

SECURE FASTENING for your Parts!

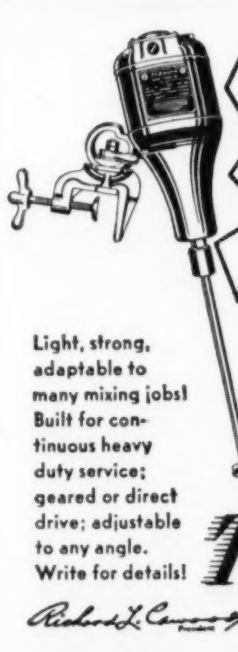
PALNUT Lock Nuts cost less than plain nuts—lock as they tighten — eliminate lockwashers—speed up assembly — save space and weight — may be re-used. Especially adapted to easy, fast power driver assembly of mass-produced items.

Check all your light duty nut-and-screw assemblies against the speed, savings and security of PALNUT Lock Nuts. Send details of application for free samples and complete information.

PALNUT TRADE MARK **LOCK NUTS**
for quick, secure fastening at low cost

The PALNUT Company
45 Cordier St., Irvington 11, N. J.

▲ For more details circle **NED-832 K4** on enclosed inquiry slip ▲



LIGHT WEIGHT
TOUGH STRENGTH
HIGH QUALITY
at moderate cost

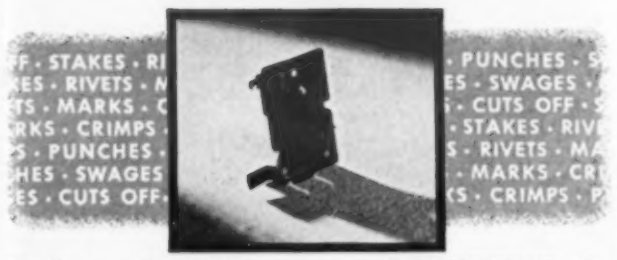
Light, strong, adaptable to many mixing jobs! Built for continuous heavy duty service; geared or direct drive; adjustable to any angle. Write for details!

PATTERSON TYPHOON MIXER

The Patterson Foundry and Machine Company
East Liverpool, Ohio, U. S. A.
NEW YORK, BOSTON, BALTIMORE, PHILADELPHIA, PITTSBURGH, DETROIT, CINCINNATI, ATLANTA, CHICAGO, ST. LOUIS, HOUSTON, DENVER, LOS ANGELES, SAN FRANCISCO, SEATTLE
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada
MONTREAL

▲ For more details circle **NED-833 K4** on enclosed inquiry slip ▲

ELECTROSTAKE CUTS COSTS
at Eastman Kodak



The Eastman Kodak Company uses ELECTROSTAKE—the automatic solenoid-operated staking machine—to stake shutter parts for Brownie Hawkeye cameras. ELECTROSTAKE presses the assemblies together—then *automatically* delivers the staking blow. Better control of the impact cuts scrap . . . and because ELECTROSTAKE is faster and simpler to use, operators are able to stake far more shutter parts than they could on foot-powered machines.

Delivers impacts up to 3500 lbs.—hold-down pressure can be pre-set from 0 to 20 lbs. Economical to buy, operate and maintain. Plugs into any 115 V., A.C. outlet.

Write — or phone Bigelow 4-6370 — for folder showing complete line of Black & Webster electric production tools.

BLACK & WEBSTER, INC.

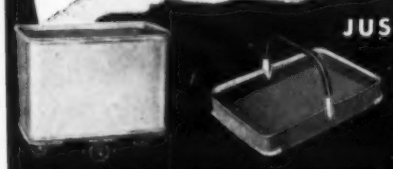
Dept. 1, 445 Watertown Street, Newton 58, Mass.
Solenoid-operated Production Tools

▲ For more details circle NED-834 K4 on enclosed inquiry slip ▲

INDUSTRY DEMAND FOR "KENNETT LINE" PROMPTS EXPANSION!

Specialized Materials Handling Equipment Now Stocked on West Coast

Because of increased demand, the broad line of Kennett hard vulcanized fibre materials handling equipment is now being warehoused at San Francisco and Los Angeles. The move fills the needs of West Coast industries for light weight, smooth, strong, tough receptacles with immediate deliveries and new low costs. The line includes trucks, trays, tote boxes, baskets, receptacles . . .

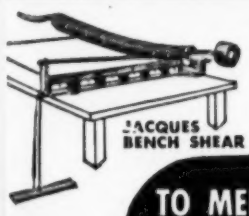


JUST OFF PRESS!

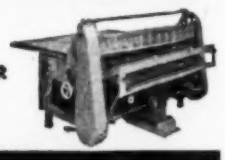
Handy 8-page guide to the Kennett Line. Write, 'phone or wire for catalog No. N-D.

FIBRE SPECIALTY DIVISION
NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

▲ For more details circle NED-835 K4 on enclosed inquiry slip ▲

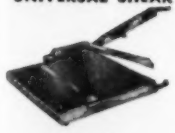


HOBBS POWER SHEAR



TO MEET EVERY CUTTING NEED HOBBS HAND AND POWER SHEARS

JACQUES UNIVERSAL SHEAR



JACQUES, JR. CUTTER

Whether you need cutters for production work or for occasional use, you'll find the most efficient and most economical answer in the Hobbs line of Jacques Hand Shears and Hobbs Power Shears. They are specially designed to cleanly, accurately cut paper, plastic, fabric, laminations, leather, synthetics and many other materials from rolls and sheets. Ruggedly built, they have hardened steel blades — will give you years of trouble-free service.

For continuous or intermittent cutting in quantity, Hobbs offers you a powerized cutter with gauges that is adaptable to any production set-up. Cuts at speeds up to 87 strokes per minute. Completely automatic production cutters are also available.

The Jacques Universal Shear is complete with table and accurate gauges for cutting sheets into uniform strips 1/8" to 20" in width. Six sizes available — 30" to 60".

You can choose from 12 sizes of Jacques Bench Shears for cutting in widths up to 10 feet. Special tables and gauge arrangements to order. The Jacques, Jr. Cutter is an accurate, versatile all-metal unit for widths 12" to 36". Self-supporting clamp automatically holds material. Table and bench models available.

Get the complete facts today! Write for catalog sheet describing any of these modern Hobbs Shears. No obligation.

HOBBS MANUFACTURING CO.
41 Salisbury St., Worcester 5, Mass.
New York Office: 132 Nassau Street
Chicago office: 549 West Washington Blvd.

EST. 1882 *Manufacturers of Modern Converting Machinery*

Jacques Hand Shears; Hobbs Production Cutters, Corner Cutters, Slitters and Rewinders, Autotronic, Tri-Power and "Adjustable Die" Presses

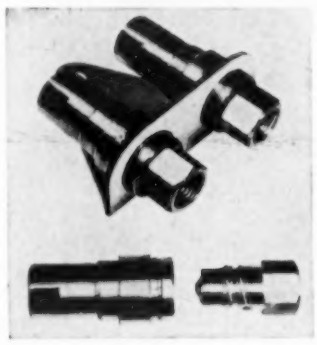
▲ For more details circle NED-836 K4 on enclosed inquiry slip ▲

ABRASIVE BELT CONTACT WHEEL
conforms to curved surfaces

Lively, long-wearing characteristics of this red-rubber compounded TF-54 contact wheel for coated abrasive belt polishing and finishing enable it to conform to contoured surfaces. High-tensile 20-durometer wheel can be run at speeds up to 10,000 surface fpm, is abrasive and oil-resistant, and is dynamically balanced. It is serrated, with 1/4-in. lands and 3/4-in. grooves and has rubber side flanges to prevent edge wear. Rim or tire is demountable. Available from **Chicago Rubber Co.**, 2624 N. Clybourn Ave., Chicago 14, Ill.

▲ For more details circle NED-837 K4 on enclosed inquiry slip ▲

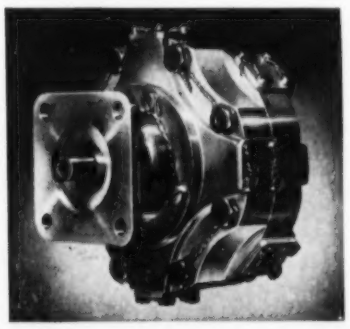
QUICK-CONNECT COUPLERS
for air and hydraulic lines



Quick connection and break-away under pressure without use of tools or loss of either pressure or fluid can be accomplished with Jiffy couplers for both hydraulic and air lines. Couplers can be used with all hydraulic operated yard implements whether towed or mounted, semi-trailer trucks, air compressor lines, or in many industrial plant applications. Coupler seals both lines instantly when uncoupled. Available sizes range from 3/8 to 1 in. Made by **Standard Valve & Coupler Co.**, 1114 Ulysses Ave. N.E., Minneapolis 13, Minn.

▲ For more details circle NED-838 K4 on enclosed inquiry slip ▲

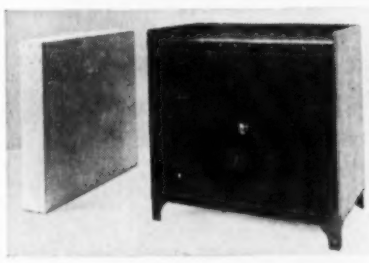
HYDRAULIC MOTOR
rated 2.9 hp at 5000 rpm



Radial type hydraulic motor built to aircraft standards is practical for use where speed and long operating life without maintenance are important. Unit operates between 1000 and 1700 psi input and will turn up 5000 rpm at latter input with rating of 2.9 hp. It measures 4 3/4 x 4 7/32 in., weighs under 4 lb and is suitable for use with all commercial mineral base hydraulic fluids. Each piston acts as valve for adjacent cylinder. Antifriction bearings and leakproof shaft seal are featured. Motor runs equally well in either direction, reverses instantly and has almost constant torque over entire speed range. Made by **Sierra Engineering Co.**, Dept. NED, 123 E. Montecito Ave., Sierra Madre, Calif.

▲ For more details circle NED-839 K4 on enclosed inquiry slip ▲

STEEL TOOL CABINETS
assembled with screwdriver, wrench



Parts which make up each of three knock - down Hallowell steel tool cabinets are packaged in cartons only one-quarter the size of assembled cabinets for storage in small place until used. Units can be bolt-and-nut assembled in four simple operations with only screwdriver and wrench. Finished in baked-on green enamel, cabinets are offered in single and double-door models. Former, with two adjustable shelves, is 34 in. high and has 15 x 21-in. working top. Latter has one adjustable shelf, is 35 1/2 in. high and can have either an 18 1/4 x 36-in. or 24 x 36-in. top. Detachable feet, or 3-in. steel-tread or rubber-tired swivel casters are optional. Made by **Standard Pressed Steel Co.**, P. O. Box 581, Jenkintown, Pa.

▲ For more details circle NED-840 K4 on enclosed inquiry slip ▲

PAYS FOR ITSELF QUICKLY IN LABOR SAVING

SABIN
One-Man
BARREL TRUCK

LOOK AROUND! How many of your employees are used to handle heavily loaded barrels and drums? You can reduce the number to ONE and save plenty by using a Sabin Barrel Truck.

OPERATION IS EASY—you run truck up to container, hook on at top and pull back on handle to pick up load. *Third Wheel Feature* assures better balance and added safety.

WRITE FOR BULLETIN NO. 48-A

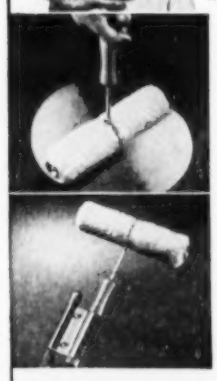
THE SABIN MACHINE CO.
6536 Carnegie Ave.,
Cleveland 3, Ohio

▲ For more details circle NED-841 K4 on enclosed inquiry slip ▲

New 2-Headed Roller
cuts plant painting time 52%

New Twin head roller furnished in four sizes!

BESTT DUO-MECHANIC *Industrial Rollers* designed for **PROFESSIONAL PAINTERS**



Exclusive T construction provides perfect balance—cuts fatigue differential action eliminates skid marks. Ideal for fences—concrete—plaster—dry wall construction.

Your order will be shipped through your nearest BESTT DISTRIBUTOR

All covers are 12/16" Lambskin

8"—No.	800	$4.89
11"—No.	1100	5.40
14"—No.	1400	6.09
18"—No.	1800	6.82

Also available in heavy duty model with Hardwood Cores.

Replacement covers available in 7/16"—12/16"—16/16" Lambskin and 7/16"—12/16" Dynel. DEPT. C

BESTT ROLLR INC. P. O. BOX 551, FOND DU LAC, WIS.

▲ For more details circle NED-842 K4 on enclosed inquiry slip ▲

SKINNER explosion-proof

STAINLESS STEEL SOLENOID VALVES

SAFETY X5 SERIES

Underwriters Approved for Class 1, Group D, Hazardous Locations — flammable gases or vapors — (Refineries, Pipe Lines, etc.)

INEXPENSIVE

Simple, extremely flexible design makes Skinner X5 Series valves *the most versatile explosion-proof valves on the market!*

X5 Series Valves are competently engineered to give trouble-free operation through millions of cycles. They are direct acting, leakproof and spring loaded for positive operation in any position. Available in a broad selection of types, voltages, pressures, flow control adjustments, port sizes and port locations.

SPECIFICATIONS: Type: Two- and Three-Way Normally Open, Normally Closed, and Directional Control; Pressure Range: 0-1000 p.s.i. Orifice Diameters: 3/64" to 1/4". Pipe Size: 1/8" or 1/4" NPT; Voltage: All AC and DC; Duty Cycle: Continuous or Intermittent. Write for BULLETIN 526A

Skinner ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Ave., New Britain, Conn.

▲ For more details circle NED-843 K4 on enclosed inquiry slip ▲

NOW! BUILD YOUR OWN Pallet Racks, Rails and Shelving...with

Nu-Rail SLIP-ON FITTINGS

AN ENTIRELY NEW METHOD OF FITTING PIPE

NO WELDING! USE ALL PARTS OVER AND OVER AGAIN!

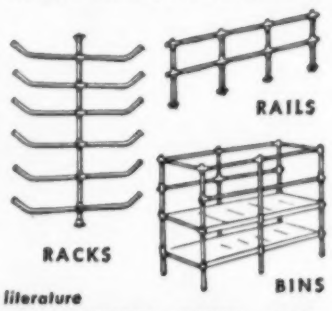
USE ANY I.P.S. PIPE OR TUBING . . .
NO PIPE CUTTING . . . NO WELDING

Build them when and where you need them

SAVE MONEY, too!

Just a few examples of Nu-Rail versatility! If it's made of pipe . . . you can make it BETTER, FASTER AND FOR LESS . . . with Nu-Rail!

Distributed coast to coast.



Write for literature

THE HOLLAENDER MFG. CO.
3840 Spring Grove Ave., CINCINNATI 23, OHIO

For more details circle NED-844 K4 on enclosed inquiry slip

LEWIS "6"

PLASTICS INJECTION MOLDING MACHINE

Greater Capacity

Designed for high-speed production of intricate large projected area parts, MODEL "6" features a fully automatic molding cycle . . . plasticizes up to 60 pounds of polystyrene per hour . . . molds parts weighing more than 7 ounces at the rate of 2½ per minute.

Maximum Economy

Large platens . . . injection pressures up to 15,000 psi . . . and a powerful new clamping device permit MODEL "6" to do the work of considerably larger machines at a fraction of their initial and normal operating costs . . . and with minimum scrap.

Positive Safety

Electrical interlocks on the safety gate, over-center position of toggle mechanism when closed and the 200-ton locking pressure applied by the revolutionary new "Hydra-Lock" clamp assure maximum safety.

Featuring "HYDRA-LOCK"

An exclusive feature of LEWIS machines, "Hydra-Lock" is the key to the outstanding performance of MODEL "6". By combining the fast closing action of a toggle mechanism with a large-diameter short-stroke hydraulic cylinder, Lewis engineers have developed the safest, most powerful mold clamping device available today on any plastics molding machine.

WRITE FOR BULLETIN 102 FOR COMPLETE DETAILS.

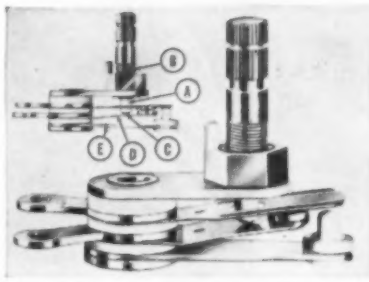
8001-LW

LEWIS

THE LEWIS WELDING & ENGINEERING CORPORATION
14 Interstate Street, Bedford, Ohio

For more details circle NED-845 K4 on enclosed inquiry slip

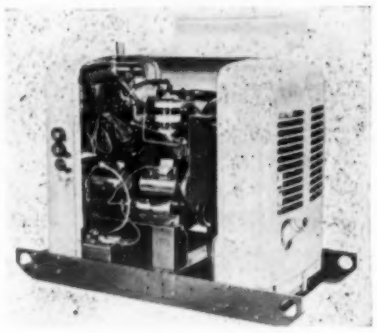
BIMETAL THERMOSTAT design maintains calibration



Pin type construction of Stemco type S and snap-acting type SA bimetal thermostats offers virtually linear operation over thousands of cycles because calibration is unchanging. Steatite pin (A) inserted in lower end of adjusting stem (B) carries a hardened steel pin (C) which applies adjustment pressure against contact spring member (D). Strip bimetal thermal member (E) is electrically independent. Thermostat features single stud mounting for rapid heat transfer, wide variety of terminal arrangements and adjusting stem made to specifications. Made by **Stevens Mfg. Co.**, Dept. B, 69 S. Walnut St., Mansfield, O.

For more details circle NED-846 K4 on enclosed inquiry slip

GASOLINE POWER UNITS packaged with one of four engines



Motive power for generators, construction and excavating equipment, pumps and other equipment can be supplied by the Willys power unit, a ready-to-operate engine "package." It is equipped with radiator, gas tank, air cleaner, electrical equipment, governor and engine mounted on a skid with steel housing. Choice of two four-cylinder engines rated 47.5 and 51 bhp at 2400 rpm and two six-cylinder engines rated 56 and 60 bhp at 2400 rpm is provided. Various power transmission adaptations are available. Made by **Willys Motors, Inc.**, Industrial Engine Dept., 1240 N. Cove Blvd., Toledo, O.

For more details circle NED-847 K4 on enclosed inquiry slip

CHARGER-EQUIPPED BATTERY for walkie type handling trucks

Equipped with a permanently mounted charger, this battery for walkie type power lift trucks permits the battery to remain on the truck and yet be charged when truck is not in use. Identified as the Charger 6 SPC-11, the battery is rated at 275 ampere-hours. Charger is plugged into any 110-v, 60-cycle outlet and can be left on without damage to battery which need not be disconnected from the truck. Top containing charger tilts back for easy access to battery for adding water. Made by **K-W Battery Co.**, 3638 W. Howard St., Skokie, Ill.

For more details circle NED-848 K4 on enclosed inquiry slip

SIDE-LOADING FORK TRUCK features springing of all wheels

Although the redesigned Traveloader side-loading fork truck is wider, turning radius is less than in previous model. Other improvements include better load distribution and stability and higher tractive effort. Model T-10-A unit features a torque converter drive and springing of all four wheels for improved roadability when used on highways and streets. Specifications are: lifting capacity, 10,000 lb; top forward and reverse travel speeds, 30 and 15 mph; standard lifting height, 144 in.; overall width, 96 in., turning radius, 22 ft 7 in.; and loader tilt, in or out, 5 degrees. Made by **Baker-Raulang Co.**, 1245 W. 80th St., Cleveland 2, O.

For more details circle NED-849 K4 on enclosed inquiry slip

"Our Magcoa Dockboard speeds loading...pays for itself"

Says James Johnson, Vice President, J. W. Johnson Company, canvas goods manufacturers, Bellwood, Ill.

"When we switched from heavy, makeshift steel plate to an engineered-for-us Dockboard, we chose Magcoa," says Mr. Johnson. "Our Magcoa Dockboard can be positioned quickly and easily by one man," he continues, "and when it's in position, *its safety angle holds it there.* Our powered equipment and operators handle loading and unloading in record time, and are then free for other handling jobs throughout the plant. We figure," says Mr. Johnson, "that our new Magcoa Dockboard will quickly pay for itself."

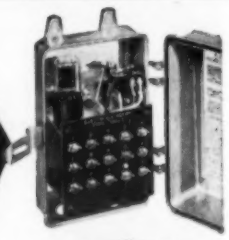
Speed *your* loading and unloading . . . send for our amazingly frank Dockboard Facts File. It tells the Magcoa Dockboard story . . . and the story behind the story.

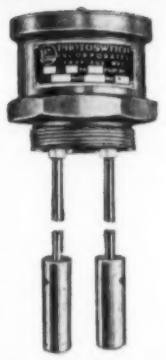
MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

For more details circle NED-850 K4 on enclosed inquiry slip

NEW!

ELECTRONIC LEVEL CONTROL





- precisely accurate
- unlimited life
- maintenance free

New Photoswitch Level Control Type 13DJ3 reaches a new high in performance . . . controls all electrically conductive liquids. No floats, no moving parts to wear or fail in service. Responds instantly to liquid touching probes . . . will sound alarm, start and stop pumps. Accuracy unaffected by temperature or pressure.

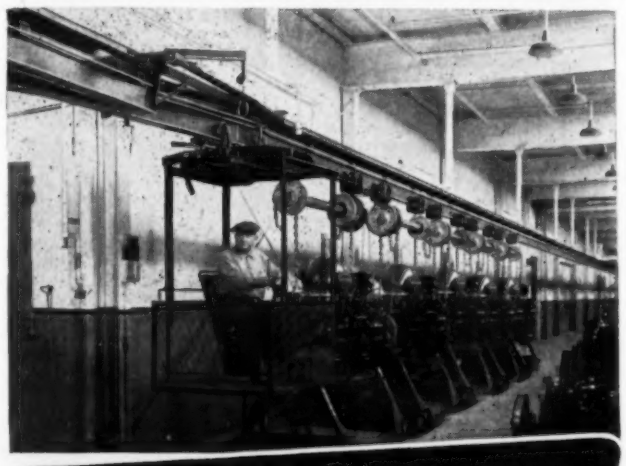
Corrosion-resistant stainless steel probes reach into tank to levels at which pumping operations are required. Contact of liquid with the probes operates Photoswitch Level Control which makes and breaks the pump control circuit.

Low current, low voltage in probe circuit for safety in explosive atmospheres. Operates from 115 or 230 volt 50/60 cycle supply.

Write today for Bulletin PF-544

Photoswitch DIVISION
ELECTRONICS CORPORATION OF AMERICA
Dept. P8-10, 77 Broadway, Cambridge 42, Mass.
Offices in all principal cities.

For more details circle NED-851 K4 on enclosed inquiry slip



what MONORAIL can do . . .

FOR LOW MAINTENANCE COSTS

American MonoRail equipment is specially engineered and carefully built for long-life, rugged service. Manual or automatic operation continues with little or no downtime for maintenance or repair.

Send for Bulletin C-1.

AMERICAN MONORAIL COMPANY
OVERHEAD HANDLING EQUIPMENT
13116 ATHENS AVENUE • CLEVELAND 7, OHIO

For more details circle NED-852 K4 on enclosed inquiry slip

MADE TO EXACTING SPECIFICATIONS

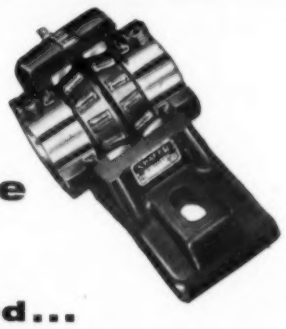
Wood Screws—Phillips or Slotted; flat, round and oval in steel, brass, silicon bronze, aluminum and stainless steel; sizes 3/16" No. 0 to 7" No. 30. Stove Bolts—slotted steel in round and flat head styles.

Packaging: Wood screws and stove bolts in confusion-proof, soil and moisture resistant green boxes with easy identification label. Bulk screws in indestructible steel cans with replaceable lids. Prompt shipment.

Samples and wood screw catalog free upon request. Box 1360-Q.

SOUTHERN SCREW COMPANY
STATESVILLE, N. C. • WOOD SCREWS • STOVE BOLTS
Factory Warehouses: New York, N. Y. • Chicago, Ill. • Los Angeles, Cal., Dallas, Texas

For more details circle NED-853 K4 on enclosed inquiry slip



To cut Maintenance Cost You Need...

Self-Aligning advantages of Shafer Roller Bearings that instantly compensate for shaft deflections. In ordinary bearings this misalignment causes binding, skewing... power loss.

High Capacity...of Shafer ConCaVex, the original low friction, high capacity bearing. This design carries radial, thrust and shock loads in the same high-capacity area in the center of the roller.

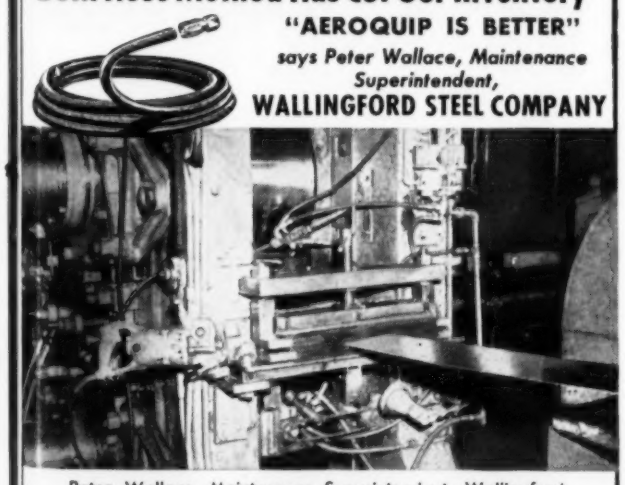
Easy Adjustment...to compensate for wear as provided by the Shafer exclusive Micro-Lock. With nothing more than a screw driver, you can make adjustment in increments of .007".

Send for Catalog 51. Shafer Bearing Division, 801 Burlington Ave., Downers Grove, Illinois.

SHAFER BEARING DIVISION
CHAIN BELT COMPANY

For more details circle NED-854 K4 on enclosed inquiry slip

"Bulk Hose Method Has Cut Our Inventory"
"AEROQUIP IS BETTER"
says Peter Wallace, Maintenance Superintendent,
WALLINGFORD STEEL COMPANY



Peter Wallace, Maintenance Superintendent, Wallingford Steel Company, Wallingford, Connecticut, says: "Aeroquip is better because of quick installation . . . By stocking several sizes of bulk hose and reusable fittings, I'm able to cut the correct length of hose needed and make a replacement in just a few minutes."

Put this "Aeroquip Idea" to work in your plant. See your distributor or write us for information.

Aeroquip
AEROQUIP CORPORATION, JACKSON, MICHIGAN
FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

For more details circle NED-855 K4 on enclosed inquiry slip

PIPE & BOLT THREADING KIT includes threader, dies, ratchet

Sets of 1/8 to 3/4-in. pipe and 1/4 to 1-in. bolt dies, No. 71 hand threader and No. 71-R ratchet are included in No. 71 pipe and bolt threading kit. All dies are furnished in 1/8-in. increments, with bolt dies available in 1/16-in. increments. They are U. S. Standard right or left hand or SAE right hand. Threader is adjustable for standard and over or under standard pipe threads and also for four permissible nut fits. Optional dies available are 1/2 and 3/4-in. conduit dies, 3/8, 7/16 and 1/2-in. pump rod dies and 20 and 27-thread dies for brass. Made by **Beaver Pipe Tools, Inc.**, 310 Dana Ave., Warren, O.

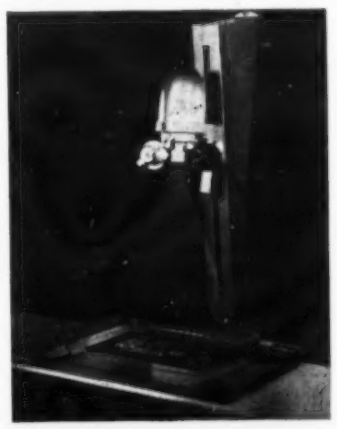
For more details circle NED-856 K4 on enclosed inquiry slip

BULK MATERIALS CONVEYOR in any length from 10 to 28 ft

With belt speed of 250 fpm, this bulk materials and small package conveyor can fill a large stoker, hopper or similar receptacle in less than 6 minutes. Unit consists of 5-in. wide steel conveyor with hopper, available in any length from 10 to 28 ft. It has 1/3 or 1/2-hp motor with adjustable mount and 15-ft cord. Adjustable head pulley permits tightening of friction surface rubber belt. Made by **Carlson Steel Co.**, Dept. PC, Batavia, Ill.

For more details circle NED-857 K4 on enclosed inquiry slip

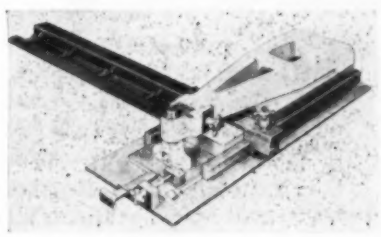
MICROFILM ENLARGER magnifies 4 to 45 diameters



Concentrated light source and redesigned optical system are features of improved model B enlarger for 16 and 35-mm microfilm. High resolution Kodak Micro-File Ektar 63-mm lens projects fine detail with sharpness and legibility at magnifications ranging from 4 to 45 diameters. Six-volt 5-amp coiled filament lamp makes printing faster than in previous models. Voltage can be increased slightly for visual focusing and magnifications over 20 diameters. Remote film transport and focus control are also featured. Made by **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle NED-858 K4 on enclosed inquiry slip

HOLE PIERCING TOOL for short run production work



Single hole Quick-set piercing tool punches from 3/32 to 2 1/8-in. diameter holes in up to 1/8-in. thick mild steel. Tool is designed for short run production work, and utilizes interchangeable punch heads and die holders, punch guides and springs. Throat depth is 24 in., and 36-in. combination back gage and end stop bar is furnished. Gage slides along rails in which 1-in. interval holes are provided for rough setting. Fine adjustments are made by a screw arrangement. This combination provides fast accurate set ups giving high repeat accuracy over a complete job run. Tool can be used with standard press or press brake, or can be actuated by air or hydraulic cylinders. Made by **General Riveters, Inc.**, Toolset Div., Hertel at Elmwood Ave., Buffalo 7, N. Y.

For more details circle NED-859 K4 on enclosed inquiry slip

FEDERAL PRESSES
28 YEARS OF QUALITY CONSTRUCTION

This Federal #44 has generous, "oversize" dimensions, making it ideal for light, bulky work that small standard presses can't handle. Note its *extra* shut height, *extra* throat depth, *extra* ram and bed areas. Typical Federal workmanship and quality. Available in flywheel or geared models—also in 26-ton size. High speed controls, optional.

Write for new catalog showing complete line. Six to 80-ton capacities.

NO. 44 FLYWHEEL TYPE 35-ton Capacity

THE FEDERAL PRESS COMPANY
506 Division Street, Elkhart, Indiana

For more details circle NED-860 K4 on enclosed inquiry slip

HERE'S THE ANSWER TO "TRAVERSE and FEED" AND "CLOSE and HOLD" OPERATIONS !

DUDCO's new PF-100 Series DOUBLE PUMPS with VALVE PANELS...give you 2000 psi "Variable Delivery" Functioning with the Economy and Reliability of Constant Delivery Operation . . . eliminate circuit components and reduce piping . . . assure top system efficiency and increase and improve production from Presses, Casting and Molding Machines, Closing and Clamping Devices, Machine Tools.

TWO VANES ARE BETTER THAN ONE!
The hydraulically balanced DUAL-VANES in DUDCO Pumps, as contrasted with conventional designs, maintain MULTIPLE AREAS OF CONTACT ON THE CAM RING . . . doubling the number of effective barriers to slippage and power loss. This patented principle is an exclusive DUDCO feature!

Write for Bulletin DP-308 . . . contains performance data, delivery control circuits, installation drawings; suggests applications. It's Free!

DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.

For more details circle NED-861 K4 on enclosed inquiry slip

Get This Informative Free Booklet on New Uses for Straits Tin

New, 20-page booklet tells important story of Straits Tin and its many new uses today. Fully illustrated. Includes sections on new tin alloys, new tin solders, new tin chemicals. Covers tin resources and supply, Malayan mining. Booklet is factual, informative—could well prove profitable to you. Mail coupon now.

THE MALAYAN TIN BUREAU
Dept. R, 1028 Connecticut Ave., Washington 6, D.C.

Please send me a copy of your free booklet on new uses for Straits Tin.

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BRAND NEW
VERTICAL-HORIZONTAL-BASE
DE-STA-CO TOGGLE CLAMP

with low silhouette
the fixture-hugger that makes it far easier to insert and remove work . . .

and complete clearance
of working area due to flop-over holding bar—ideal for positioning metal or plastic sheets!

Send for FREE CATALOG
on the new DE-STA-CO Models 507 and 509

DE-STA-CO DETROIT STAMPING COMPANY
World's FIRST Line of TOGGLE CLAMPS
360 Midland Avenue • Detroit 3, Michigan

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BREEZE Job-Engineered BELLOWS

...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC.
700 Liberty Ave., Union, N. J.

OTHER BREEZE PRODUCTS: ACTUATORS · RADIO SHIELDING · AERO-SEAL HOSE CLAMPS

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cold finished carbon
hot rolled alloy
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• All our warehouses carry a wide range of types, sizes and grades of steel bars. And you can always count on consistent high quality with the bars we carry. Why not simplify your buying by ordering *all* your bar stock from a single dependable source . . . U. S. Steel Supply?

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Please send me, without obligation, descriptive literature on the following types of bars:
☐ carbon C.F. ☐ alloy H.R. ☐ alloy C.F. ☐ stainless
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U. S. STEEL SUPPLY DIVISION
General Offices 208 So. La Salle St., Chicago 4, Ill.
Warehouses and Sales Offices Coast to Coast
UNITED STATES STEEL

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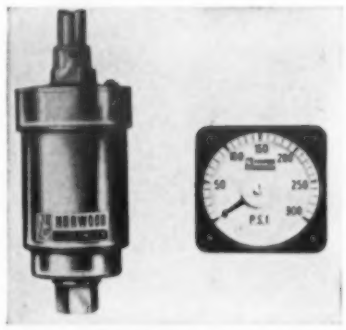
MEASURING SYSTEM
for temperature and pressure

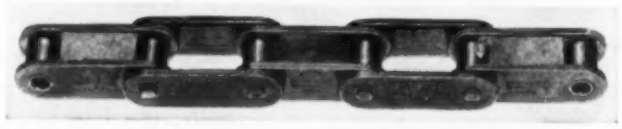


ElectroSyn pressure and temperature measuring system consists of a source of constant 60-cycle current, pressure or temperature detectors mounted on vessel or pipe line, and an indicating meter mounted on remote control panel. System utilizes a high resolution electromagnetic rotary transducer signal generator with a linear output. Fluid pressure in a Bourdon tube or temperature-sensitive bimetallic ribbon spiral rotates the generator to produce a proportional electrical signal. Detectors can be used in hazardous locations. Stability is unaffected by vibration and line voltage changes. System can be safely overloaded 100 per cent. Made by **Control Engineering Corp.**, Controls Div., Dept. NED, 934 Washington St., Norwood, Mass.

▲ For more details circle NED-866 K4 on enclosed inquiry slip ▲

ROLLER CHAIN
operates over standard sprockets

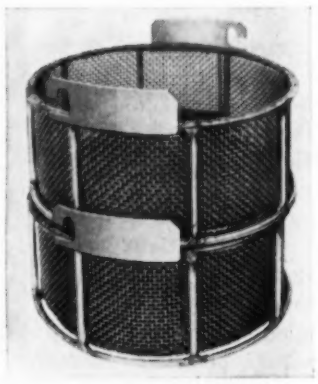
Demand for economical double pitch roller chain for use on farm equipment and conveyor applications is met by AG series chain, available in 1¼ and 1½-in.



pitches. It intercouples with ASA double-pitch roller chain and operates over the same cut or cast tooth type sprockets. Heat treatment of parts and controlled press fits reduce wear and lock type bushings increase ability to withstand shock and heavy loads without stiffening. Several conveyor attachments will be available. Made by **Link-Belt Co.**, 220 S. Belmont Ave., Indianapolis 6, Ind.

▲ For more details circle NED-867 K4 on enclosed inquiry slip ▲

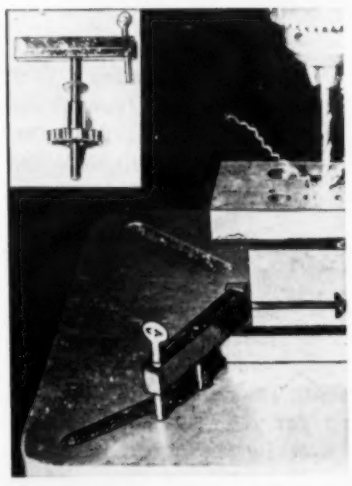
STAINLESS STEEL BASKET
used for parts annealing, handling



Welded and strong enough to hold up to 600 lb of metal, this all stainless steel basket and carrier can be used for most operations from machining to packing and shipping, including annealing. It measures 12 x 28 in. and has lugs welded to the upper rim to act as grippers and stacking guides. Three units can be stacked together in a stainless steel carrier for handling as a unit. Made by **Wiretex Mfg. Co.**, 41 Mason St., Bridgeport, Conn.

▲ For more details circle NED-868 K4 on enclosed inquiry slip ▲

DRILL PRESS TEE CLAMP
drill table acts as lower jaw



Function of this hold-down Tee Clamp for drill presses is similar to that of a parallel clamp, except that table of press acts as the lower jaw, while upper jaw is extended arm or T. Head of clamp (top of T) is slipped up through one of the table cross slots and tip of bar opposite the thumb screw is placed over object to be clamped down. Thumb screw is then adjusted until bar is parallel with table. From below table, clamp is tightened by turning knob counterclockwise. Only slight turn of set screw is required for quick loading and unloading. Made by **Hunter Tool Co.**, 6606 S. Gretna Ave., Whittier, Calif.

▲ For more details circle NED-869 K4 on enclosed inquiry slip ▲

WHICH V-BELT is best for you?

If the correct size of endless V-Belt is not readily available, or if you have to tear down machinery to install, then the best belt to use is open-end V-Belting fastened with
ALLIGATOR **V-BELT FASTENERS**

★ In this way you can make up V-Belts in *any length* to fit *any drive* the fast economical way—V-Belts that perform exceptionally well.

★ In contrast to link-type belts these ALLIGATOR fastened V-Belts have just *one* strong joint . . *stretch and follow-up maintenance are reduced to a minimum.*

ALLIGATOR INTRODUCTORY V-BELT DRIVE UNITS

contain V-Belting, Fasteners and Tools—everything you need in one compact package to make up V-Belts quickly. Available in sizes A, B, C & D.

Ask for Bulletins V-215 and V-216
Order From Your Distributor
FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

▲ For more details circle NED-870 K4 on enclosed inquiry slip ▲

THIS WASH FIXTURE HAS NO FAUCETS

● One Sprayhead replaces 4 faucets, has no moving parts—provides tempered water supply for 2 persons with perfect sanitation.

● Self-Flushing Bowl cuts janitor labor. Bowl flushes continuously when DUO is in use. No collection of dirty water.

● Foot-Control provides spray of clean water at a touch of the foot. Supply cut off instantly as foot is removed. Hands touch nothing but clean running water.

TOPS FOR SANITATION, CONVENIENCE, GOOD WILL

Bradley DUO-Washfountains are the last word in modern, *sanitary*, small washroom facilities. Foot-control provides the ultimate in protection against communicable disease germs, and maximum convenience as well. People *like* to wash at Bradley DUOS. They know they are sanitary and *safe*.

Installation is simple and economical. One DUO takes the place of two ordinary basins. Piping connections are reduced, floor and wall space saved. Continued savings result from lower water consumption and simplified maintenance. Available with white or green vitreous enamel finish or in stainless steel.

BRADLEY Duo Washfountains
Write for Bulletin K958
Distributed Through Plumbing Wholesalers
Bradley Washfountain Co., 2253 W. Michigan St., Milwaukee 1, Wis.

▲ For more details circle NED-871 K4 on enclosed inquiry slip ▲

OMICRON COMPASSES

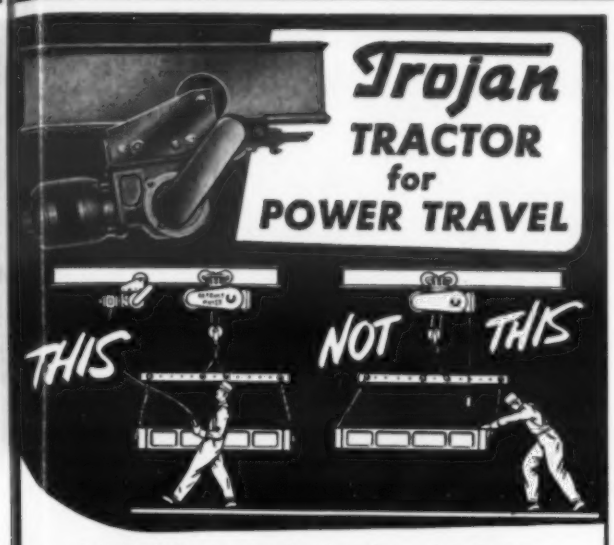
THE BEAM COMPASSES, 72" Radius Capacity in the palm of your hand. Fast, Accurate, delightful to use. Only one hand needed to guide the scriber. The housing swings freely around the Centerpin. Spring loaded lever holds beam in locked position. Comes with scriber pins for sheetmetal layout work. Price $7.50

THE BOW COMPASSES, six Inches Radius Capacity. Quick Change, Selflocking, Slow Motion Adjustment in one mechanism of stunning simplicity. No threads, only a smooth rod and a trigger. Light weight and perfect balance. Price $4.50

Ask for our new
ELLIPSE COMPASSES
for all Ellipses up to 12 Inches. Price $12.00

Ask your dealer or write us for literature
The Omicron Co., Dept. E3, Box 907, Glendale, Calif.

▲ For more details circle NED-872 K4 on enclosed inquiry slip ▲



Attached by a simple draw-bar, the Trojan Tractor quickly converts existing, slow, hand-pushed hoists and light overhead cranes into fast, power-traveled units. Save time, effort; reduce material handling costs.

• *Ask for Trojan Tractor Bulletin 810 today.*

DETROIT HOIST & MACHINE CO.

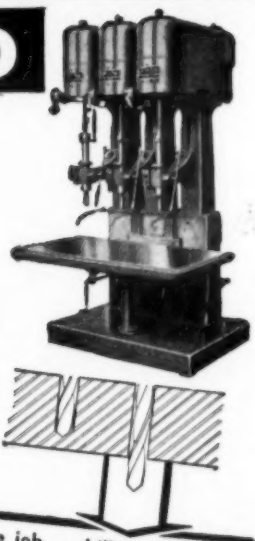
8267 Morrow St., Detroit 11, Mich.

Designers and Manufacturers of Hoists and Cranes

Since 1905

For more details circle NED-873 K4 on enclosed inquiry slip

EDLUND



CUTS COST $1280... ON ONE JOB*

An EDLUND 2F

Variable Speed

Drilling and Tapping Machine Makes the difference

The Edlund 2F *instant change variable speed* lets you find correct drilling speed under practical on-the-job conditions. Increases tool life. Saves valuable production time.

Standard or Special Models from 1 to 8 Spindles. 8", 12", or 15" overhang—capacity to 1¼". Power Feed, Reversing Motor Tapper, Lead Screw Tapper, and Back Gears available.

The job . . . drilling 7/16" hole 1½" deep in X1020 steel. The Edlund Variable Speed machine drilled 135 pieces per hour. Standard machine drilled 108 pieces per hour. Result: Edlund 2F increased production 25% . . . cut cost $1,280.*

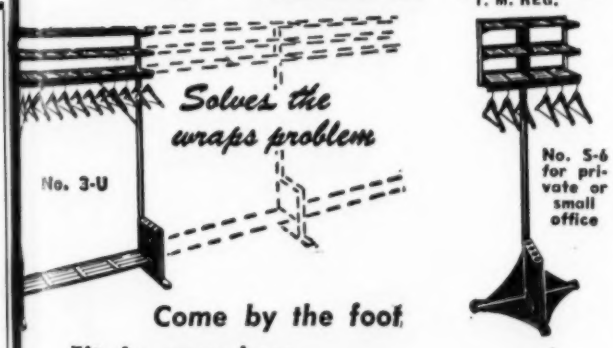
* Case history folder #SF on request. Write for Bulletin #140. Specifications and quotations prepared promptly on request.

EDLUND MACHINERY COMPANY Cortland, New York

Division of Bradley Edlund Corp. Affiliated with Precision Castings Co., Inc.

For more details circle NED-874 K4 on enclosed inquiry slip

The **OFFICE VALET** T. M. REG.



Come by the foot

Fit in anywhere

These modern steel wardrobe racks keep wraps aired, dry and "in press". End crowding of coats and hats in damp lockers or cabinets. Save floor space too—provide ventilated hat space, coat hanger (spaced apart from all others), built-in umbrella stand and overshoe shelf for 3 persons per sq. ft. 4 ft No. 3-U rack (above) accomodates 12; No. S-6 costumer (right) accommodates 6. Single or double (back-to-back) units in lengths to fit any available space. Strongly welded, heavy gauge furniture steel; baked enamel finish—modern office colors. End locker room evils—answers wraps problem in factories, offices and company cafeterias.

Write for Bulletin OV-8

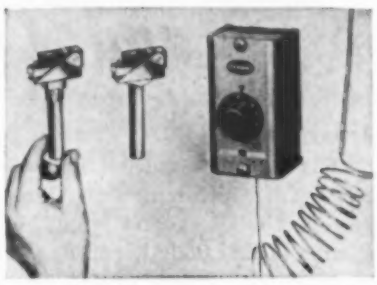
VOGEL-PETERSON CO.

"The Checkroom People"

121 West 37th Street • Chicago 9, Illinois

For more details circle NED-875 K4 on enclosed inquiry slip

SNAP-ACTION THERMOSTATS carry 20-35 amp electrical loads

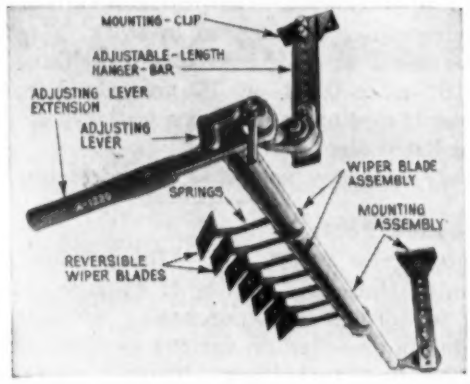


Inherent differential of local bulb type snap-action thermostat for direct temperature control installation is 2 to 3° F. One of two new liquid-filled units designed to carry 20 to 35-amp electrical loads, the local bulb type has a heat sensing area of almost 10 sq in., making possible good response time and sensing accuracy. Protected against temperature overshoot, it has ⅝-in. diameter, 3½-in. long sensing leg and is adjustable in a 50 to 300° F range. Other bulb-and-capillary model is for remote installation and is offered with up to 25 ft of tubing in 50 to 250° F and 150 to 550° F ranges. Bulb diameter is 3/16-in. and length is 11 in. Control mechanism is mounted in a flanged 3 x 3 x 6-in. case. Made by **Fenwal Inc.**, 70 Pleasant St., Ashland, Mass.

▲ For more details circle NED-876 K4 on enclosed inquiry slip ▲

CONVEYOR BELT CLEANER features spring-mounted wiper arms

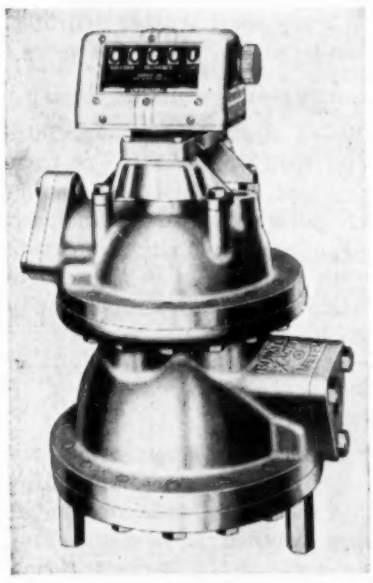
Material adhering to a conveyor belt after discharge can be scraped off into a discharge chute by means of this improved belt cleaner. Steel wiper blades



perpendicular to belt surface, but diagonal to its line of travel are mounted on spring arms so that pressure against belt can be adjusted for different operating conditions. Material scraped off belt cannot build up on vertical edge of wiper arm. Cleaner has no moving parts and is designed with adjustable mounting brackets to fit any belt conveyor head pulley assembly. Made by **Stephens-Adamson Mfg. Co.**, 12 Ridgeway Ave., Aurora, Ill.

▲ For more details circle NED-877 K4 on enclosed inquiry slip ▲

FLUID METERS handle pressures up to 500 psi



Providing positive displacement accuracy on industrial liquid measuring jobs, two Hi-Pressure Xacto meters handle working pressure up to 500 psi. Two models have ratings of 15 and 50 gpm, with 1¼-in. screwed and 1½-in. flanged connections, respectively. Working parts are of stainless steel, with hard carbon bearings and Teflon pistons. Meters can be equipped with straight-reading, totalizing or ticket-printing dials and are designed for either top or bottom mounting. Made by **Bowser, Inc.**, 1381 Creighton Ave., Ft. Wayne 2, Ind.

▲ For more details circle NED-878 K4 on enclosed inquiry slip ▲

Manufacturing Control

International Business Machines Corp.—IBM methods based on modern punched card equipment ranging from sales analysis to production planning are shown in well-illustrated 28-page booklet "Manufacturing Control". The many different reports and forms shown illustrate how modern business methods can be successfully applied to a wide variety of management problems.

▲ For more details circle NED-879 K4 on enclosed inquiry slip ▲

INCREASE PRODUCTION WITH

AIRKOLET Chuck

Patent Pending

- FOR HIGH SPEED PRODUCTION ON INDEXING TABLES
- HOLDING POWER ADJUSTABLE FROM ROUGH CASTINGS TO FRAGILE PARTS
- REGISTERS IN EXACT POSITION CASTINGS OR PARTS UP TO 1/16" VARIATION
- HORIZONTAL OR VERTICAL MOUNTING ON INDEXING TABLES, MILLING MACHINES, AND DRILL PRESSES

PRODUCTION TESTED!

The new AIRKOLET Chuck has been tested in production on indexing tables for over a year, on millions of parts of widely differing sizes and shapes. Its acceptance of 1/16" variation in stock sizes of parts eliminated much unnecessary grinding! Production reported of one machine using AIRKOLET in *1 hour* equalled that of *8 hours* by former method.

WRITE TODAY for our Bulletin T101 for complete information and specifications.

PITT INDUSTRIES

DEPT. NED-3 CARNEGIE, PENNSYLVANIA

For more details circle NED-880 K4 on enclosed inquiry slip

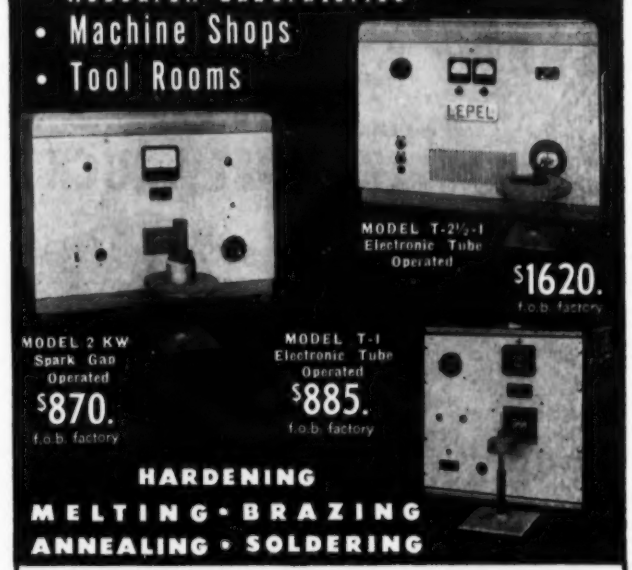
Lepel's 3 *new*

LOW COST • PORTABLE

HIGH FREQUENCY *Induction* **HEATING UNITS**

Ideal for . . . .

- Production Heating of small parts
- Educational Institutions
- Research Laboratories
- Machine Shops
- Tool Rooms



HARDENING

MELTING • BRAZING

ANNEALING • SOLDERING

The Lepel line of induction heating units represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating. With a background of half a century of pioneering electrical and metallurgical experience, the name Lepel has become the symbol of induction heating equipment embodying the highest standards of engineering achievement, dependable low cost operation and safety.

Amazing in its speed, Lepel equipment reduces the time required for hardening, annealing, stress relieving, brazing, soldering and melting from minutes to seconds. It performs these operations with a degree of precision and uniformity rarely attained through other processes.

LEPEL Electronic Tube GENERATORS available from 1 kw. to 100 kw.

LEPEL Spark Gap CONVERTERS available from 2 kw. to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information on high frequency induction heating.

All Lepel equipment is certified to comply with the requirements of the FCC.

"Visit our Booth No. 1031 at the National Metals Exposition, Chicago, Nov. 1-5"

LEPEL HIGH FREQUENCY LABORATORIES, INC.

55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-881 K4 on enclosed inquiry slip

How Wire Cuts Costs!

Get this **FREE** Handbook

Practical designer's handbook shows how the cost of many products can be reduced by using wire. Simple redesigns replace castings, forgings, stampings, tubing and sheet steel components with less expensive welded wire and wire-and-strip assemblies. Handbook contains technical data—charts, tables, drawings, specifications, etc.—plus information on various types of production procedures. Write for your copy to:

WIRE GOODS Headquarters

E.H. Titchener & Co.
79 CLINTON ST. BINGHAMTON, N. Y.

For more details circle NED-882 K4 on enclosed inquiry slip

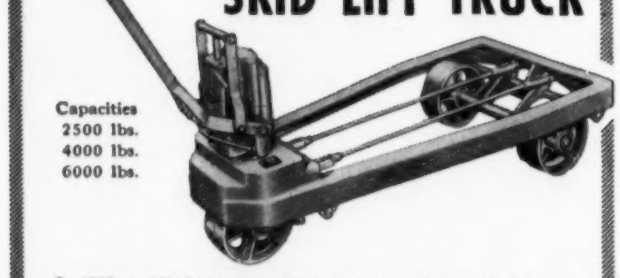
RAYMOND

Hydraulic
PALLET LIFT TRUCK

Capacities: 4000 or 6000 lbs.

AMERICA'S HEAVY DUTY Twins!

Hydraulic
SKID LIFT TRUCK



Capacities
2500 lbs.
4000 lbs.
6000 lbs.

- IT'S A CINCH to handle heaviest pallet or skid loads with RAYMOND Hydraulic Lift Trucks! These husky trucks . . . built to deliver years of rugged wear . . . are truly America's heavy-duty twins.
- Both RAYMOND Trucks have powerful hydraulic assemblies to make load-lifting easy. Handles operate with long full strokes . . . or short strokes where space is limited. Handles are pressure-balanced to stay put in any position, won't fall when trucks are not in use.
- These trucks come with convenient finger-tip lowering . . . an exclusive RAYMOND feature. They're highly maneuverable, have full 360° turning radius for steering into or out of close quarters. Specially mounted, machine-faced wheels make 'em easy to pull over roughest floors and on upgrades.

The RAYMOND CORPORATION
4140 Madison St., Greene, N.Y.

Please send literature describing ☐ RAYMOND Skid Lift Trucks ☐ RAYMOND Pallet Lift Trucks ☐ RAYMOND Hydraulic Elevating Equipment Catalog.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

MAIL COUPON

For more details circle NED-883 K4 on enclosed inquiry slip

New Literature and Catalogs

Bronze Pumps

Oberdorfer Foundries, Inc.—24-page illustrated catalog "Oberdorfer Bronze Pumps" contains all data needed to select and apply line of bronze pumps. Pumps in line include rotary gear models in capacities to 150 gpm, rubber impeller types with 0 to 22-gpm capacities and centrifugal pumps which deliver up to 35 gpm. Performance tables and charts aid in the application of correct model for given requirements.

For more details circle NED-884 K4 on enclosed inquiry slip

Corrosionproof Materials & Services

Ceilcote Co.—Comprehensive information on line of corrosionproof linings, bricks, bonding cements, protective coatings and mastic floors is found in catalog G-201. Made from a variety of base formulations, materials have different chemical and physical properties that meet most industrial requirements. Services rendered by company include furnishing materials, supervision for installation or contract for the complete job.

For more details circle NED-885 K4 on enclosed inquiry slip

Precision Bore Glass Tubing

Wilmad Glass Co.—Listed in 4-page illustrated bulletin 100 are various sizes of precision bore and capillary tubing which are carried in stock. Sizes range from 0.0025-in. to 0.1255-in. ID in capillary tubing and 0.1261-in. to 0.9844-in. ID precision bore tubing in standard, medium and heavy wall types. Square tubing is listed also.

For more details circle NED-886 K4 on enclosed inquiry slip

Cold-Headed Parts

National Screw & Mfg. Co.—"Bring Your 'Special' Problems to National" is title of 16-page illustrated booklet for design and purchasing officials. Case history briefs are cited on various products produced by cold-heading techniques. Typical parts shown include special fasteners, diesel engine push rod, flattened ball collar stud, round collar thumb screw and adjusting or levelling screws.

For more details circle NED-887 K4 on enclosed inquiry slip

Electronic Instrumentation

Consolidated Engineering Corp.—The dynamic role played by electronic measurement and control instruments in modern industry is explained in 22-page illustrated bulletin "Greater Profits Through Consolidated Instrumentation." Described are testing facilities to check automobile engine transmission efficiency, balance electric motors, and evaluate shock protection devices. Also covered are chemical instruments which operate on mass spectrometer principle.

For more details circle NED-888 K4 on enclosed inquiry slip

Lift Truck Work Kit

Yale & Towne Mfg. Co.—A method for predetermining the time necessary for fork lift trucks to perform specific operations is provided in "Work Kit" dealing with standard lift truck performance data. Included are examples of materials handling which demonstrate the technique for applying the data as well as charts which give times for basic truck motions. Quantity of work sheets is furnished.

For more details circle NED-889 K4 on enclosed inquiry slip

Refractory Metals & Parts

Fansteel Metallurgical Corp. — Engineering, research and production facilities of this company for producing such refractory metals as tantalum, tungsten and molybdenum are detailed in 24-page illustrated brochure. Parts made from various forms of these metals are shown. Sections are devoted to electrical contacts, selenium rectifiers, carbide tools and resistance welding materials.

For more details circle NED-890 K4 on enclosed inquiry slip

Chains, Gear Drives & Bearings

Link-Belt Co.—Among diverse products listed in 340-page illustrated standard products catalog 950 are chains and sprockets for conveying, elevating and power transmission, enclosed gear drives, ball and roller bearings, vibrating screens, car spotters and power unloading scoops. Catalog is thumb and alphabetically indexed and contains capacity charts and dimension tables to aid in rapid selection of products

For more details circle NED-891 K4 on enclosed inquiry slip

SPEED CONTROL WIDE RANGE! LOW COST!

new catalog free

Just off the press! New illustrated catalog describes SPEED SELECTOR'S new line of Variable Pitch Sheaves. These sheaves are for extra-wide range of speed control on fixed centers...also completely new designs for low speed applications. Save time, trouble, money...WRITE FOR CATALOG No. 44 TODAY.

SPEED SELECTOR INC.
118-N NOBLE COURT • CLEVELAND 13, OHIO

For more details circle NED-892 K4 on enclosed inquiry slip

Helpful 56 page book **FREE**

if you use saws send for this book

This free book is based on facts and experience from many years' use of Foley precision saw filing equipment in thousands of plants. It contains pictures and helpful data showing how firms have actually increased sawing production 25% to 40%, lengthened saw life, reduced breakage, produced better work and have lowered maintenance costs (one firm reports an annual saving of $350). Book includes instructions illustrating how automatic sharpening can benefit you. Request Manual No. 100—no obligation.

FOLEY MANUFACTURING CO. • 3323 N.E. 5th St., Minneapolis 18, Minn.

For more details circle NED-893 K4 on enclosed inquiry slip

for ready reference

This B&W Technical Data Card gives Analyses of Standard Alloy Steels (based on A.I.S.I. and S.A.E. requirements). Send for TDC176.

TA-4072(LP)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

For more details circle NED-894 K4 on enclosed inquiry slip

fast, economical parts assembly

Quadriga's modern high production facilities assure you precision quality, prompt delivery and lowest possible cost. All types of washers and metal stampings . . . press capacity to 150 tons, depth of draw to 4 in. . . . complete production line facilities for all types of parts assembly work.

Write for illustrated catalog . . . send B/P, sample or data for estimate.

THE QUADRIGA MANUFACTURING CO.
221 West Grand Avenue, Chicago 10, Illinois

For more details circle NED-895 K4 on enclosed inquiry slip

Now time your jobs AUTOMATICALLY with CALCULAGRAPH!

Photo courtesy of F. Jacobson & Son Albany, New York

Prints date..
starting time..
finishing time..
— and total elapsed time!

Save time and eliminate clerical errors with Calculagraph accurate-to-the-minute, printed job time records. Use these data cards for computing costs, estimating on reorders. One Calculagraph can record job time data for an entire shop or department.

NEW! AUTOMATIC DATER!

Standard on all electric models. Automatically changes date — eliminates incorrect dating of records.

ASK FOR COMPLETE INFORMATION, TODAY
Illustrated literature and sample job cards will be sent promptly on request. Just call or write Dept. 302

CALCULAGRAPH COMPANY
Sussex St., Harrison, New Jersey
STANDARD OF ACCURACY SINCE 1892

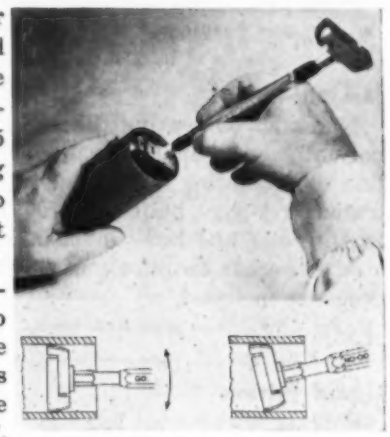
For more details circle NED-896 K4 on enclosed inquiry slip

WASHER-TYPE LOCKNUT
for grounding electrical assemblies

Washer type Palnut locknut has tooth elements in its flanged base which dig through nonconducting elements to give an electrically grounded assembly. Nut exerts a double locking spring action on the screw threads as the washer teeth engage the metal seat. It is available in No. 10-24 and ¼-in.-20 sizes. Free samples are available from **Palnut Co.**, 45 Cordier St., Irvington 11, N. J.

For more details circle NED-897 K4 on enclosed inquiry slip

ADJUSTABLE BOREGAGES
measure 0.995 to 6.005-in. holes



Bellmouth, taper and out-of-round are detected by line of adjustable boregages offered in 15 sizes for measuring holes from 0.995 to 6.005 in. Instrument consists of pencil-size handle connected by adapters to fixed adjustable torus-design gages at each end. One gage is set to "go", the other to "no-go" dimensions with micrometer, gage blocks or comparator. When hole is within tolerance, "go" gage rocks freely without forcing, while the "no-go" gage binds. Any other obtained result indicates hole is not within tolerances. Each gage has single micrometer-type adjusting screw plus a lock screw that passes through tension nut providing controlled pressure between the two gage components. Made by **M. C. Hutto Co.**, 6516B Detroit Ave., Cleveland 2, O.

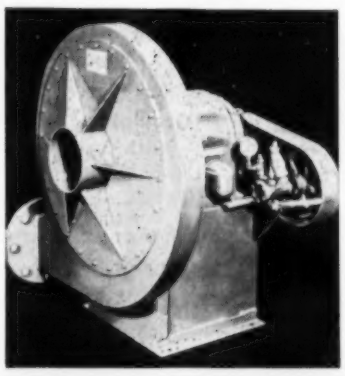
For more details circle NED-898 K4 on enclosed inquiry slip

DIRECT CURRENT SUPPLY
has adjustable 6-v dc output

Model MA65 tubeless magnetic amplifier direct current supply unit is designed for various electronic applications. Input is 105-125-v single-phase, 60-cycle ac, and output is 6 v dc, adjustable ±10 per cent. Load range is 0 to 5 amp. The 19 x 5¼ x 12-in. unit has a regulation accuracy of ±1.0 per cent for any combination of line and load conditions. Made by **Sorensen & Co.**, 375 Fairfield Ave., Stamford, Conn.

For more details circle NED-899 K4 on enclosed inquiry slip

TURBO-PRESSURE BLOWERS
deliver constant pressures from 4 to 20 oz while volumes vary



Constant air pressure from 4 to 20 oz per sq in. can be maintained by turbo - pressure blowers while varying volumes of air are being supplied. Available in single and double inlet fans, direct or belt driven, blowers furnish air at high pressures for use with oil and gas burners on industrial furnaces, and for scale blowing and air curtains. They are also used in forging plants; steel and rolling mills; foundries; glass, brick and tile plants; for tunnel kilns, and for pneumatic systems.

Operation is quiet and vibrationless. Inlets are designed to minimize shock loss and outlets are large, permitting low velocities and minimum friction loss when piped to full size. Rated capacity is delivered only when unit operates at 3450 rpm. Made by **Chicago Blower Corp.**, 9867 Pacific Ave., Franklin Park, Ill.

For more details circle NED-900 K4 on enclosed inquiry slip

TAPER-LOCK
BUSHINGS WITH WELD-ON HUBS

NOTHING ELSE LIKE IT!

FOR your sprockets, gears, clutches, motors, impellors — for wheels of all kinds where service conditions are *really rugged*—there is nothing like TAPER-LOCK. This famous patented bushing—supplied for your use with matching TAPER-LOCK Weld-on Hub — gives you an easy-mounting, true-running unit that locks to the shaft with firmness equivalent to a shrunk-on fit. *WRITE* for special bulletin A-420A with specifications and entire range of shaft sizes (1/2" to 10").

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

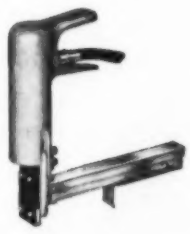
DODGE
of Mishawaka, Ind.

For more details circle NED-901 K4 on enclosed inquiry slip

new Bostitch
AIR-DRIVEN TACKER
drives and countersinks staples like these...

(actual sizes)

The new Bostitch T-3 speeds any number of woodworking jobs — from tacking glazing strips, decorative molding, and furniture backing, to pinning tenons in mortises. It does the work of comparable size brads or finishing nails. Does it faster, neater, more securely.



Drives narrow crown staples with leg lengths from 3/16" to 3/4". Legs press outward to increase holding power. Countersinking leaves work all ready for puttying and painting.

New lightweight tacker operates at high speed with little effort. Slight pressure against work triggers machine. Quick-fill magazine holds staples in any one of five leg lengths.

For demonstration, write Bostitch, Inc., 690 Mechanic Street, Westerly, R. I.

Fasten it better and faster with **BOSTITCH**
STAPLERS AND STAPLES

For more details circle NED-902 K4 on enclosed inquiry slip

REDUCE YOUR COST OF RADIAL HOLE DRILLING

A Standard Machine Designed for Variety Production

Why build a special machine for drilling radial holes when a standard machine equipped with Govro-Nelson Automatic Drilling Units will, in many cases, perform the work of a special machine that would cost considerably more!

Any number of drilling units up to eight may be employed, the units being movable not only through 360 degrees on the circular table but also movable endwise on riser plates.

The machine may also be used for tapping operations with Govro-Nelson Tapping Units. It has a range of 1/32" to ⅜" on drilling operations and 0.80 to ⅜-16 on tapping operations, depending on material and spindle speeds. Literature on request.

GOVRO-NELSON CO.
1933 Antoinette
DETROIT 8, MICH.

Automatic **DRILLING UNIT**

For more details circle NED-903 K4 on enclosed inquiry slip

Put machines on
ISOMODE® PADS

...to save money

That's right—installed under machine feet, these ribbed, resilient pads cut costs. First—by absorbing most of the shock and vibration normally transmitted to floor. This in turn reduces building damage and machine maintenance—also muffles annoying noise.

In addition, you save on *installation costs.* No bolting needed—machines stay put on the pads. No waste either—you use only as much as needed for the load by easily cutting pads to size. One economy standard package gives you mountings for 80 tons of machinery—including punch presses.

Made of Neoprene, Isomode Pads last for years. Write for Bulletin 415 and prices.

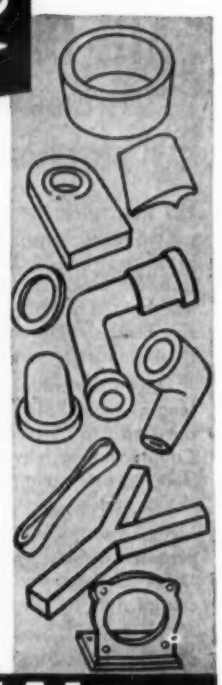
® Trade Mark Reg. U.S. Pat. Off.

IT PAYS TO KEEP A PACKAGE IN STOCK

THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

▲ For more details circle NED-904 K4 on enclosed inquiry slip ▲

Silicone



RUBBER PARTS
may be your most efficient, most economical way to:

★ REDUCE FABRICATING COSTS
★ MEET "TOUGH" SPECIFICATIONS
★ IMPROVE PRODUCT QUALITY

Get this free
ILLUSTRATED INFORMATION

16-page booklet with data insert on Silicone Rubber, tells how this amazing material solves parts problems for manufacturers of many types of products. . . . Contains complete details on Colonial's fast, efficient rubber compounding and molding. Write to:

410-S

COLONIAL RUBBER COMPANY
Ravenna, Ohio

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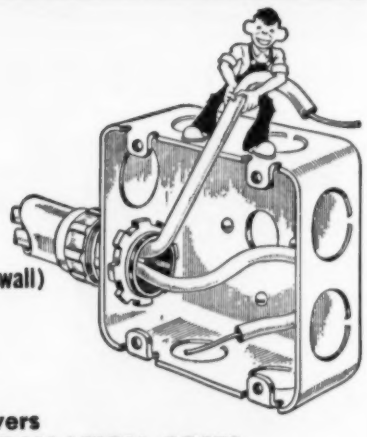
T&B's NEW INSULATED THROAT CONNECTOR FOR E M.T. (Thinwall)



- Lowers INSTALLATION COSTS
- Guards against BRUISED WIRING

A bright blue factory-inserted insulating liner completely covers the area inside the connector throat. A lip protrudes slightly beyond the connector body to form a telltale bright blue ring—similar to other T&B "blue" fittings—visual assurance for an inspector that the connection is insulated.

No separate insulating bushing needed! Installs just like a conventional connector. Same wrench size fits body and gland hexes. Extra-deep body provides a long area of firm, rigid support for tubing. Steel body, gland, ring, and locknut. Meets NEC requirements. UL approved. Write to T&B for free sample and descriptive literature or see your T&B Distributor.

T 424

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street • Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P. Q., Canada

MANUFACTURERS OF QUALITY ELECTRICAL FITTINGS SINCE 1898

▲ For more details circle NED-906 K4 on enclosed inquiry slip ▲

New Literature & Catalogs

Nickel Alloy Steel Properties

International Nickel Co.—"Tensile and Impact Properties of Quenched and Tempered Nickel Alloy Steels in Different Sizes" is a 36-page bulletin (A-68) which contains over 70 mechanical property charts. They show the properties which may be regularly expected in the nickel alloy steel in various section sizes. General characteristics of each are briefly described.

▲ For more details circle NED-907 K4 on enclosed inquiry slip ▲

Acetate Fiber Tapes

Minnesota Mining & Mfg. Co.—Examples of varied industrial applications for Scotch acetate fiber and film self-adhering tapes are shown in 6-page folder. The 42 illustrations show uses for sealing, protecting, holding, edging, bundling and splicing. Tape is colored and transparent and may be printed.

▲ For more details circle NED-908 K4 on enclosed inquiry slip ▲

In-Line Valves

Numatics Operating Valve—Two and three-way normally open and normally closed valves comprise line of Numatics in-line valves, described and illustrated in 8-page bulletin 4070. They are made in ¼ to 1-in. size and have solenoid controlled, pilot operated or remote air pilot controlled actuation. Specifications are included.

▲ For more details circle NED-909 K4 on enclosed inquiry slip ▲

Liquid Filters

Wagner Brothers, Inc.—How efficient, low cost clarification of solutions is made by filtering acid, alkaline or neutral liquids through permanent membrane type liquid filters is related in 4-page folder F 10-54. All suspended particles down to 1/10-micron are removed. Precoating, filtering and cleaning operations of the units are explained.

▲ For more details circle NED-910 K4 on enclosed inquiry slip ▲

Temperature Monitoring System

Thermo Electric Co.—Temperature-monitoring system described in 8-page illustrated bulleting No. 70 can handle a wide variety of problems when components are used as "building blocks," that is, combined in different ways for different requirements. Applications, operation details and specifications are included.

▲ For more details circle NED-911 K4 on enclosed inquiry slip ▲

Turbo-Pressure Blowers

Chicago Blower Corp.—Line of turbo-pressure blowers designed to furnish air at high pressures for use with oil and gas burners on industrial furnaces for pneumatic systems, scale blowing and air curtains is subject of illustrated bulletin CTB103.

▲ For more details circle NED-912 K4 on enclosed inquiry slip ▲

Clamps, Chisels, Punches, Drills

Cincinnati Tool Co.—Selection and application information on line of Hargrave load-tested clamps, chisels, punches and masonry drills are found in 36-page illustrated catalog No. 65. Also included are circle cutters, file cleaners and a saw vise.

▲ For more details circle NED-913 K4 on enclosed inquiry slip ▲

Concrete Storage Bins

Neff & Fry Co.—29-page technical manual on concrete stave storage bins or silos includes capacity tables, details of construction, methods of materials handling in bins and typical installations. Bins are designed particularly for storage and handling of flowable bulk materials.

▲ For more details circle NED-914 K4 on enclosed inquiry slip ▲

Machine Tool Accessories

South Bend Lathe Works—40-page illustrated catalog 5418 contains descriptions of line of machine tool attachments and accessories. Details, specifications and prices are given for lathe, drill press, shaper and pedestal grinder accessories. Offered free to shopmen and industrial purchasers.

▲ For more details circle NED-915 K4 on enclosed inquiry slip ▲

Lead Screw Tapping Tools

Automatic Methods, Inc.—Bulletins 201 and 601 are descriptive of Auto-Tap tapping heads which incorporate lead screw, reversing mechanism and positive depth control. This compact unit clamps to quill of any drill press. Capacities up to ¾-in. can be set up quickly for manual or automatic operations.

▲ For more details circle NED-916 K4 on enclosed inquiry slip ▲

Check WEBB Fine WIRE for
Cost-Saving QUALITY
Time-Saving SERVICE

Quality standards at Webb Wire have enabled customers to reduce their inspection time on some wires by as much as 75%. You can rely on Webb for quality, as well as speedy service—overnight in some cases. Prompt attention and equal care are given to small as well as large quantity orders. Webb specializes in supplying these kinds of fine wire:

✓ WEBB NEEDLE WIRE
✓ WEBB STAINLESS SPRING WIRE
✓ WEBB HIGH CARBON WIRE
✓ WEBB SPECIALTY STAINLESS WIRE

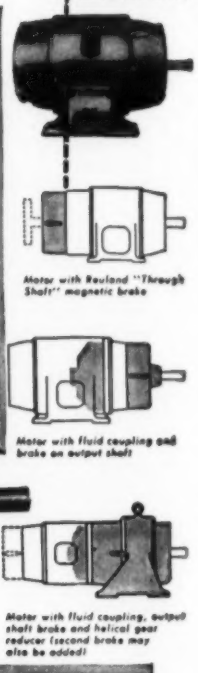
Write for our booklet, "A Look at Wire Making the Webb Way", at no obligation.

WEBB WIRE DIVISION
The Carpenter Steel Company • New Brunswick, N.J.

▲ For more details circle NED-917 K4 on enclosed inquiry slip ▲

exclusive
REULAND
"Xpandable" design

typical adaptations from this BASIC DESIGN



Motor with Reuland "Through Shaft" magnetic brake

Motor with fluid coupling and brake on output shaft

Motor with fluid coupling, output shaft brake and helical gear reducer (second brake may also be added)

combines motors brakes • fluid couplings gear-reducers into tailor-made single-unit POWER PACKAGES!

GREATER COMPACTNESS...
one service responsibility!

Instead of buying and aligning several separate units, install Reuland *tailor-made, single-unit Power Packages.* You save space and weight, reduce prices up to 25%—simplify installation—improve in-the-field performance.

Literally dozens of combinations are available to fit every powering job. All economical, *standard assemblies* using the basic Reuland "XPANDABLE" motor design.

If your equipment utilizes a motor, brake, fluid coupling, gear reducer (or any combination) why not find out first-hand what a Reuland Power Package can do for you. Give us the details and we'll even submit a "tailor-made" test unit on approval.

OVER 800 "SPECIAL" ELECTRIC MOTOR DESIGNS...
Still further versatility is provided by the Reuland "Library of Specials." Over 800 motors with special electrical and mechanical characteristics...800 ways you can save development work, get in production faster!

Write today, outlining your particular power problem. No obligation, of course.

RE REULAND ELECTRIC COMPANY
Distributors in all principal cities

WESTERN DIVISION: Alhambra, California • EASTERN DIVISION: Howell, Michigan

▲ For more details circle NED-918 K4 on enclosed inquiry slip ▲

NEW

Weld-Bilt

automatic

CONVEYOR-LIFT ELEVATORS

speed your production flow!

One of three Weld-Bilt elevators in the automatic plant of a leading Television Manufacturer

Weld-Bilt Products Include:

Here's a great time and man-saver where production flow demands *multiple-level* conveyor systems . . . It's a new Weld-Bilt development in AUTOMATIC Conveyor-Lift Elevators. Lifts or lowers packages or parts from one level to another, automatically selecting and lifting certain packages, passing others, if desired. Power rollers on lifting platform move load off in any required direction. All this is done without manual attention, to keep your production moving swiftly, without interruption.

The Weld-Bilt Automatic Conveyor-Lift can be built to any designed capacity, any height, with controls to handle any situation or need. Write today for details — or the services of a Weld-Bilt materials handling engineer. You'll save money, time, labor. Let us prove it!

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS
311 WATER STREET, WEST BEND, WISCONSIN

For more details circle NED-919 K4 on enclosed inquiry slip

AUTO-PAK YOUR PRODUCTS
to get big packaging advantages

The Auto-Pak is a low cost, compact, small machine designed to package anything from pills to powder puffs — quickly, efficiently, economically. It will take your product, wrap it in a heat sealing material (cellophane, foil, kraft), seal the four sides, cut off and deliver an attractive package—as many as one every second.

The Auto-Pak eliminates the cost and storage of prefabricated bags and the manual operations of filling and sealing. It is used in 24 different industries to package 89 different types of products. Send us samples of your products. We'll Auto-Pak them and return them to you to show you what this versatile machine can do. We'll also send along detailed information and prices on this popular packaging machine. Write or call today.

PAK-RAPID INC.
530 North 21st. Street Philadelphia 30, Pa.
LOcust 7-4840
Representatives in Principal Cities

For more details circle NED-920 K4 on enclosed inquiry slip

Here's Why "BUFFALO" INDUSTRIAL EXHAUSTERS get the job done better!

ENDURANCE

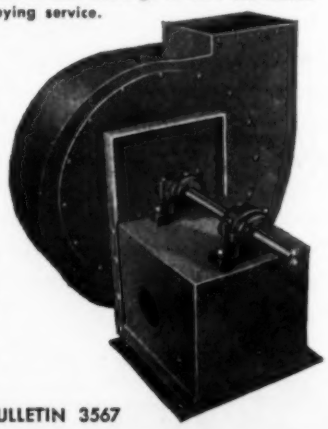
Punishment-proof construction includes all-welded, heavy steel plate housings and rotors; oversize shafts and bearings to take continuous gas exhaust or materials conveying service.

EFFICIENCY

Smooth interior surfaces with no rivet heads to cause friction, mean high efficiency air or materials exhausting with "Buffalo" Industrial Exhausters. This, plus easy maintenance, means lower operating cost.

MODELS FOR EVERY JOB

"Buffalo" Exhausters are built in models for high temperatures, corrosive fumes, erosive or stringy materials—even forced draft applications.

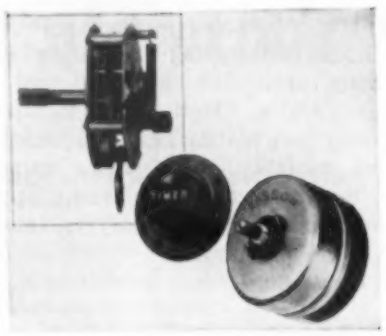


WRITE TODAY FOR BULLETIN 3567

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

For more details circle NED-921 K4 on enclosed inquiry slip

PRECISION TIMING SWITCH
for any setting up to 2 hours



Center stud mounting of this compact, precision bell timer switch permits it to be installed easily in any appliance, device or machine that requires a timing unit. Switch is dependable in operation even at high ambient temperature. Friction clutch allows setting and resetting at will for any period up to 2 hours. Clear, single stroke bell warns of automatic shut-off at end of preset period. Switch is rated 125 v, 13 amps and has UL approval. It measures 2½-in. diameter by 2⅝ in. List price is $4.00. Made by **Kasson Die & Motor Corp.**, 32-14A Northern Blvd., Long Island City 1, N. Y.

For more details circle NED-922 K4 on enclosed inquiry slip

THERMOCOUPLE WELDER
joins No. 14 to 30 wire sizes

Instantaneous welding by pushbutton is provided by the Kup-L-Weld welding instrument designed for lab technicians who make thermocouples to measure temperature. Operator merely adds flux to metal, touches the couple to the electrode and pushes a button. Chromel-Alumel, Chromel-Constantan, Copper-Constantan, Iron-Constantan and Platinum-Rhodium are among different metals, in wire sizes from 14 to 30, which can be joined. All components are encased in single, compact housing, and an adjustable filter on top of unit protects operator from flash. Installation merely requires connection to 115-v, 60-cycle outlet. Made by **Burrell Corp.**, 2219 Fifth Ave., Pittsburgh 19, Pa.

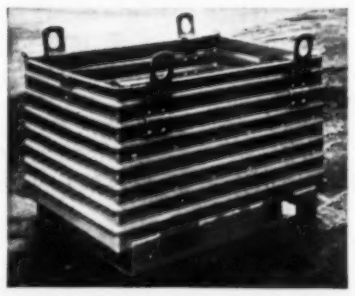
For more details circle NED-923 K4 on enclosed inquiry slip

FLEXIBLE LINING MATERIAL
for tanks carrying corrosives

Based on polyvinyl chloride resins, Vyflex L-10 thermoplastic flexible lining material is suitable for numerous industrial needs. It is used to protect tanks, fume ducts, tank cars and trucks and a wide variety of process equipment from corrosive substances. It resists attack of such materials as acids, alkalis and plating solutions at temperatures up to 160° F. Elasticity prevents damage from thermal expansion and contraction and minimizes damage from mechanical abuse. Current loss in electrolytic reactions is minimized by good insulating qualities. Material is available in black or white. It is easy to clean and has a smooth polished surface. Lining can be applied to wood, steel or concrete structures in shop or field without curing. Made by **Kaykor Industries, Inc.**, 4453 Broad St., Yardville, N. J.

For more details circle NED-924 K4 on enclosed inquiry slip

FORK ROLL-OVER BOX
handles hot forgings without warping

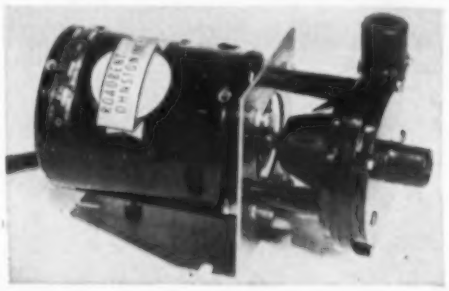


Low alloy, high tensile 7-gage steel is used in making this heat resistant tierable fork roll-over box. Corrugated carrier handles red hot forgings without warping as its sides and bottom are perforated with 100 1-in. ventilating holes for uniform heat dissipation. Triangular bead on the top flange reinforces the top for stacking. Boxed-in fork channels provide for safe roll-over dumping, support box bottom and prevent tiering overloaded boxes. Slots permit four-way fork entry and riveted lugs provide for crane handling. Box volume is 20.2 cu ft, sufficient for 6000 lb of forgings and dimensions are 48 x 33 x 24 in. Made by **Union Metal Mfg. Co.**, Dept. NE, Canton 5, O.

For more details circle NED-925 K4 on enclosed inquiry slip

BRO-JO CENTRIFUGAL PLASTIC PUMPS

OUTSTANDING PUMPS for
Dispensing Machines, Refrigeration, Machine Tools, Photographic Processes, Optical Grinding



BRO-JO pumps are molded from a thermosetting plastic which is formulated for extreme chemical resistance and low water absorption. The molded parts have a hard, gloss finish, which resists abrasion and reduces friction loss to a minimum. It also eliminates danger from liming or clogging, as hard water alkalines will not build up on the plastic.

Write or Wire for Specification Literature

BROADBENT-JOHNSTON, Inc. 6845 E. Compton Blvd. Compton 2, Calif.

For more details circle NED-926 K4 on enclosed inquiry slip

For more details circle NED-927 K4 on enclosed inquiry slip

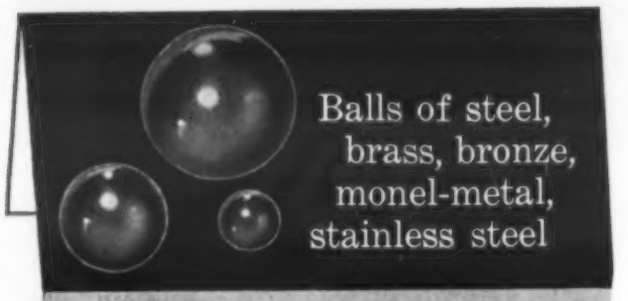
TEMCO **ELECTRIC FURNACES**

used for accurate ashing of dust samples from atomic tests by **ATOMIC ENERGY COMMISSION**

Every day, more plants and laboratories are switching to TEMCO bench-type electric furnaces for *precision* results in process control, general lab work and heat treating of small parts, tools, dies, etc. 1500 Series shown above is one of eight different sizes available - - with either manual or electronic controls. Easy to install and operate, economical. $55 to $507. Write for data and nearest dealer's name.

THERMO ELECTRIC MANUFACTURING CO.
484 HUFF ST., DUBUQUE, IOWA

For more details circle NED-928 K4 on enclosed inquiry slip



BALLS
HOOVER
BALL BEARINGS

America's only ball bearings with Honed Raceways

The Aristocrat of Bearings

HOOVER BALL and BEARING COMPANY
Ann Arbor, Michigan

▲ For more details circle NED-929 K4 on enclosed inquiry slip ▲

THE *Sutton* MOTOR DRIVEN PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USE FOR
- EXHAUSTING
- DUST
- SMOKE
- FUMES
- VAPOR
- FORGE BLASTING

CONVEYING COTTON, WOOL, SHAVINGS
COOLING AND DRYING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY. CENTRIFUGAL TYPE. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6". Write for literature and prices.

Sutton Manufacturing Corp.
112 W. WILSON AVENUE NORFOLK, VIRGINIA

▲ For more details circle NED-930 K4 on enclosed inquiry slip ▲

HERE'S A MAN YOU SHOULD KNOW

He's one of hundreds of traveling MALL salesmen whose mobile tool "warehouses" are equipped for on-the-job demonstrations. He will be only too happy to demonstrate any of the hundreds of MALL tools you want to see in action. There are forty MALL Service Warehouses, coast to coast. Phone or write the one nearest you—or any of the thousands of MALL stocking dealers—or our Chicago home office for a free demonstration without obligation.

THE BIGGEST ASSORTMENT OF POWER TOOLS OFFERED BY ANY MANUFACTURER

The MALL line includes many types and sizes of: Small Electric Drills—Heavy Duty Electric Drills—Portable Electric Saws—Gasoline Chain Saws—Bench Grinders—Electric Chain Saws—Electric Polisher-Sanders—Electric Screwdrivers—

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Electric Impact Wrenches—Flexible Shaft Machines—Portable Pneumatic Saws—Pneumatic Chain Saws—Pneumatic Grinders—Pneumatic Drills—Pneumatic Polishers—Pneumatic Sanders—Pneumatic Screwdrivers—and MANY OTHERS!

MALL TOOL COMPANY PORTABLE POWER TOOLS Gasoline • Electric • Air
7727 S. Chicago Avenue, Chicago 19, Illinois

Please have one of your traveling MALL salesmen call on me when he is in my neighborhood.
Name
Firm
Address
MU-123

▲ For more details circle NED-931 K4 on enclosed inquiry slip ▲

New Literature & Catalogs

Electroplating Methods & Equipment

U. S. Galvanizing & Plating Equipment Corp.—Among apparatus described and illustrated in 16-page catalog "Methods & Equipment for Electro-Plating" are plating barrel apparatus, still tank equipment, variable speed plating units, continuous plating units, mechanical cleaning apparatus, automatic acid treatment units, dryers, electrical equipment, solutions and tanks.

▲ For more details circle NED-932 K4 on enclosed inquiry slip ▲

Gray Iron & Steel Castings

Campbell, Wyant & Cannon Foundry Co.—"One Source for Your Casting Needs" is a 24-page illustrated booklet which presents up-to-date information on all types of gray iron and steel castings. Various types made are illustrated. Limited or large runs of regular and centrifugal types of castings are produced.

▲ For more details circle NED-933 K4 on enclosed inquiry slip ▲

Lumber Hoist

B. M. Root Co.—Style HA lumber hoist for use where lumber in kiln load lots must be handled from one elevation to another is subject of 4-page illustrated bulletin 201. It continuously adjusts load so that top layer of boards is at machine bed level. Standard unit is made in 8, 12 and 15-ton capacities.

▲ For more details circle NED-934 K4 on enclosed inquiry slip ▲

Table Type Blast Cleaner

American Wheelabrator & Equipment Corp.—The 72-in. Wheelabrator Swing Table is an airless blasting machine for production cleaning of castings, forgings, weldments and parts, either large or small. It can also be used for deflashing plastics and die castings as well as preparation of metal parts for plating or finishing. Full details are given in bulletin No. 944.

▲ For more details circle NED-935 K4 on enclosed inquiry slip ▲

Illuminated Inspection Magnifier

E. W. Pike & Co.—Details of the Flash-O-Lens illuminated magnifier which simplifies inspection work are given in illustrated folder. Both battery and plug-in electric models are available in 5X and 7X magnifications. Achromatic lenses in 20X and 40X magnifications are available for fine work.

▲ For more details circle NED-936 K4 on enclosed inquiry slip ▲

Fluorescent Lighting

Sylvania Electric Products Inc.—Written in non-technical language "Fluorescent Lighting Guide Book" contains information on what fluorescent lighting is, its advantages, available lamp sizes, colors, accessories and related information. This 24-page reference digest is offered to users of fluorescent lamps.

▲ For more details circle NED-937 K4 on enclosed inquiry slip ▲

Designing Investment Castings

Midwest Precision Castings Co.—"How to Design Precision Investment Castings" is a pocket-size guide covering the benefits as well as the limitations of the "Lost Wax" process. Materials chart lists physical properties and applications of some of the more popular metals that are cast by this method. Basic parts design principles are discussed.

▲ For more details circle NED-938 K4 on enclosed inquiry slip ▲

pH Measurement & Control

Bristol Co.—38-page illustrated bulletin Q1304 deals with complete instrumentation for pH measurement and automatic control in wide range of industries. Complete pH systems as well as individual instruments are described.

▲ For more details circle NED-939 K4 on enclosed inquiry slip ▲

Molding Presses for Reinforced Plastics

Hydraulic Press Mfg. Co.—Improvements made in line of molding presses for producing reinforced plastics are presented in 8-page illustrated bulletin 5404. Equipment specifications are given and story of process in pictures is included.

▲ For more details circle NED-940 K4 on enclosed inquiry slip ▲

History of Roofing

Twinsburg-Miller Corp.—A light, entertaining cartoon treatment is employed in 20-page booklet, "Roofing—Then and Now" to trace the history of roofing. Also covered is the development of Glasfab fiber glass roofing membrane.

▲ For more details circle NED-941 K4 on enclosed inquiry slip ▲

Push Button Control. . . .
PLANT AUTOMATION with
VAC-U-LIFT

FLEXIBLE TO YOUR JOB

"Vac-U-Lift", the all purpose material handler is your answer to plant automation. Engineered for your specific needs, "Vac-U-Lift" lifts anything FASTER, BETTER AND CHEAPER.

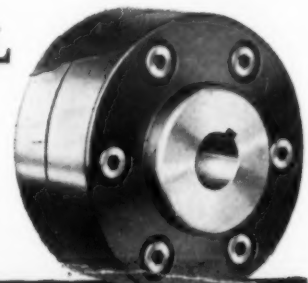
"VAC-U-LIFT" automatically insures instant attachment and release "Vac-U-Lift" pads of various sizes adapt themselves to your handling problem. FREE illustrated literature gives complete details. Write today.

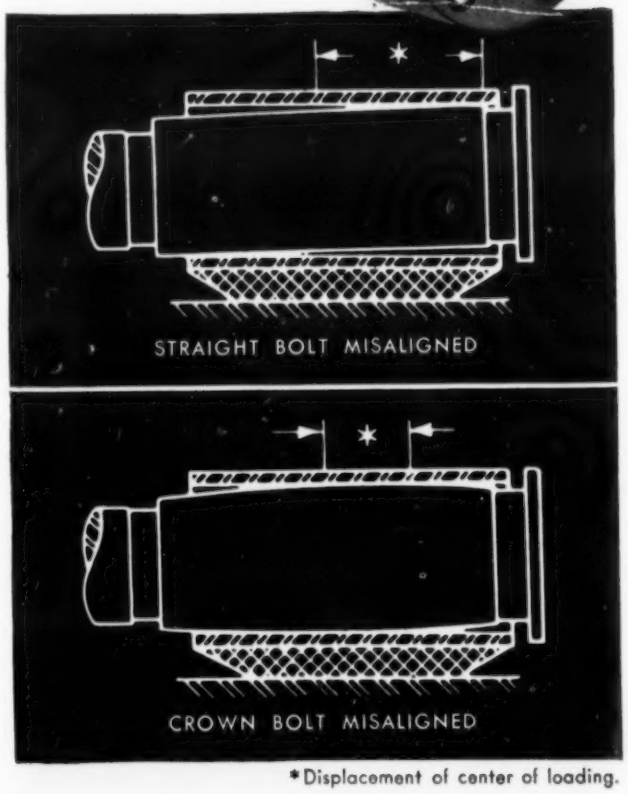
BLAKESLEE
MANUFACTURING COMPANY
SALEM, ILLINOIS

▲ For more details circle NED-942 K4 on enclosed inquiry slip ▲

The crown distributes the load in

DE LAVAL
Crown Couplings





*Displacement of center of loading.

The crowned bolt in De Laval crown couplings increases the life of the rubber bushing by distributing stresses over a greater area. That means 1. Bushing and bolt are subject to lower unit pressures, less deformation and less wear. 2. Greater misalignment is permissible. 3. Vibration is most effectively dampened. • *Bulletin 2203 contains complete selection data on De Laval crown couplings. Send for your copy.*

DE LAVAL
Crown Couplings

DE LAVAL STEAM TURBINE COMPANY
DL284 *808 Nottingham Way, Trenton 2, New Jersey*

▲ For more details circle NED-943 K4 on enclosed inquiry slip ▲

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition.

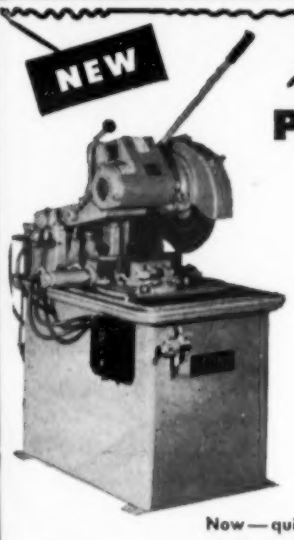
WATERLOO METAL BOXES AND CHESTS

Write for FREE book, including complete information.

Waterloo VALVE SPRING COMPRESSOR CO. WATERLOO, IOWA

For more details circle NED-944 K4 on enclosed inquiry slip

NEW



Automatic POWER-FED Cutting Head for STONE Model M-75

ONE SIMPLE LEVER FOR AUTOMATIC CUTTING

Now—quicker—safer—cutting with controlled feeds, gives even greater efficiency to Stone High-Speed cutting equipment. The automatic feed improves the quality of cut, eliminates operator fatigue, increases production rates and increases wheel life.

You Save up to 25% on wheel costs with power feed!

AVAILABLE AS OPTIONAL EQUIPMENT ON NEW MACHINES OR AS SEPARATE UNIT FOR INSTALLATION ON PRESENT MACHINES.

Write Today For Complete Information

STONE MACHINERY CO., INC. Fayette St. Manlius, N. Y.

For more details circle NED-945 K4 on enclosed inquiry slip

BRING Florida Weather INTO YOUR PLANT THIS WINTER

• You'll be just as comfortable this winter as you would be in Florida, if you follow this simple suggestion. Put a fast-venting Heat-Kwik Super-Silvertop Steam Trap on every unit heater. Super-Silvertop Heat-Kwiks bring unit heaters up to maximum heat output in 2½ minutes—save hundreds of dollars by letting you turn on steam as much as a half hour later every morning. Put them on every unit heater to keep your plant warm, reduce unit heater corrosion, and to save on fuel bills. See your jobber today.

The V. D. ANDERSON COMPANY
subsidiary Chesapeake Industries
1958 West 96th Street • Cleveland 2, Ohio

FREE—36-page book shows how to select steam traps for unit heaters.

Solving STEAM TRAP PROBLEMS

SUPER-SILVERTOP STEAM TRAPS

For more details circle NED-946 K4 on enclosed inquiry slip

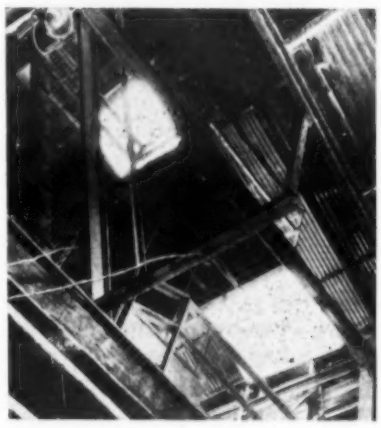
New Processes and Materials

EXTERIOR GRADE LAMINATE
for garage doors, resists weathering

High impact strength and resistance to splintering, delaminating or cracking due to weathering are advantages provided by Masonite ¼-in. Dorlux, an exterior grade two-ply laminate designed for use in garage doors. The hardboard also has good paint-holding features based on its grainless character. Product is presently available for shipment in all states east of the Rocky Mountains. Made by **Masonite Corp.**, Suite 2039-N, 111 W. Washington St., Chicago 2, Ill.

For more details circle NED-947 K4 on enclosed inquiry slip

CORRUGATED ROOFING
glass fiber resists corrosion



Opaque gray sheets of polyester glass fiber corrugated roofing and siding will resist corrosion due to chemical and acid fumes. Samples immersed in a 3 per cent sulfuric acid solution for 3 months show no appreciable structural change. Material is molded in corrugations to nest with all standard roofing and siding sheets. Made by **Resolite Corp.**, Dept. D-2, Zelienople, Pa.

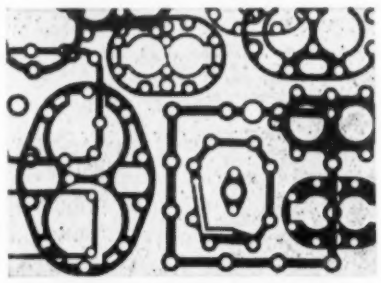
For more details circle NED-948 K4 on enclosed inquiry slip

MASONRY COATING
rubber base water resistant type

Durable Pliotone masonry coating is based on Goodyear Pliolite synthetic resin. It provides resistance to water and chemical attack when used on such surfaces as concrete, stucco, asbestos shingle, brick, hot plaster and other masonry finishes. Coating is non-oxidizing, mildew resistant and chemically inert to alkaline masonry. It is available in nine bright, fast colors and can be applied by brush or spray. Made by **Preco Chemical Corp.**, Dept. NE, 84 County Court House Rd., New Hyde Park, N. Y.

For more details circle NED-949 K4 on enclosed inquiry slip

ASBESTOS SHEET PACKING
will seal against Freon-22



Average tensile strength of 3000 psi and a density of 1.10 oz per cu in. are claimed for R-54 compressed asbestos sheet packing for head gaskets of refrigeration compressors. It effectively seals against Freon-22. Neoprene binder swells when in contact with refrigeration oil in the gas to assure a tight seal. Made by **Raybestos-Manhattan, Inc.**, Packing Div., 121 E. Steigle St., Manheim, Pa.

For more details circle NED-950 K4 on enclosed inquiry slip

ALUMINUM PROTECTIVE COATING
stands flexing, temperature extremes

Complete protection against rust, moisture, warping, checking and cracking can be given to iron, steel, aluminum or wood surfaces with Duro aluminum shell coating. When brushed or sprayed on, resultant non-porous, anticorrosive coating cannot be penetrated even by ethylene glycol or penetrating oil. Coating is composed of atomized aluminum that is bonded onto surface with fluxing vehicle. It dries dust-free in 1 hour and to metallic hardness in 6 hours. When dry it can actually be filed. Coating will stand considerable flexing, as well as temperature extremes. Formulated by **Woodhill Chemical Co.**, 1393 E. 33rd St., Cleveland 14, O.

For more details circle NED-951 K4 on enclosed inquiry slip

Easy To Use ADJUSTABLE Floating REAMERS

Two types are available: Type S for standard reaming and Type SL for blind hole reaming. Reamer sizes and range: from ¾" to 4".

Wickman-Brown Floating Reamers with micrometer adjustment assure absolute accuracy, complete concentricity and superfine finishes on standard and blind hole reaming operations. Each reamer has a permanent positive float that is designed for maximum effectiveness throughout the full range of the reamer. Optimum float is predetermined in manufacture and requires no adjustment.

The simple adjustability of Wickman-Brown reamers results in considerable direct labor economy for the user. Adjustment to desired setting requires only the skill, effort and time needed to set a micrometer—no keys or special tools are required. Blades may be sharpened in usual manner without affecting micrometer readings.

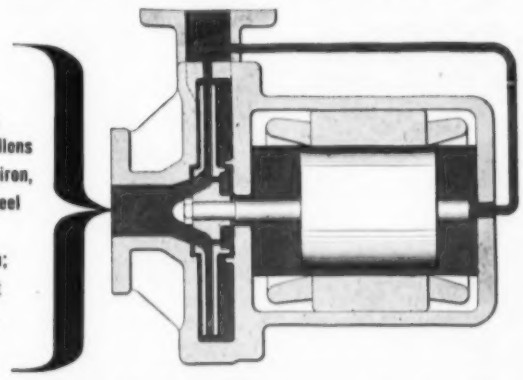
FEATURES
• Fully Floating Blades
• Blades may be renewed
• Micrometer type setting
• No gears or springs
• Positive and constant float

THE Wickman MANUFACTURING CO. 10327 CAPITAL AVE. (OAK PARK) DETROIT 37, MICH.

For more details circle NED-952 K4 on enclosed inquiry slip

Chempump

THE PUMP THAT CAN'T POSSIBLY LEAK
...no mechanical seals...no stuffing box



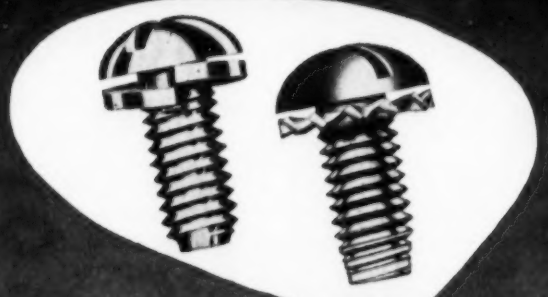
⅛ to 3 horsepower, 0 to 180 gallons per minute; iron, stainless steel or monel construction; prices start at $96.00.

Think of what this means when handling toxic, corrosive or expensive process fluids. Chempump, with its magnetically-driven enclosed rotor can work—and save—for you, too. It is performance-proved in over 6 years of field experience. Write for complete data.

CHEMPUMP CORPORATION
1304 EAST MERMAID LANE • PHILA. 18, PA.

For more details circle NED-953 K4 on enclosed inquiry slip

ASSEMBLY TIME REDUCED with EATON SPRINGTITES® AND SEMS



EASY TO USE
SPEED ASSEMBLY
ELIMINATE WASHER LOSS

SEND TODAY FOR FREE ENGINEERING BULLETIN S-49

EATON MANUFACTURING CO. RELIANCE DIVISION
OFFICES and PLANTS • MASSILLON, OHIO
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NEW YORK • CLEVELAND • DETROIT • CHICAGO
ST. LOUIS • SAN FRANCISCO • MONTREAL

For more details circle NED-954 K4 on enclosed inquiry slip

Cuts Metal 15 Times Faster than Hand Hack Saw!

New . . . Porter-Cable Portable Band Saw only $215.00

Slices through 1½" cold rolled steel in 41 seconds! That's 15 times faster than a good man with a hack saw . . . *2½ times faster than bulky power hack saws!*

Compact. Weighs only 16 lbs. Easy to handle in any position. Powered for heavy duty. Band speed of 240' per min. insures swift, smooth cutting of all materials up to 3¼" dia. round, or 3¼"x4¼" rectangular. Highest grade precision ball and needle bearings. Universal 115V AC-DC, 25-60 cycle motor (230V available at extra cost).

Write for full information about time-saving application.

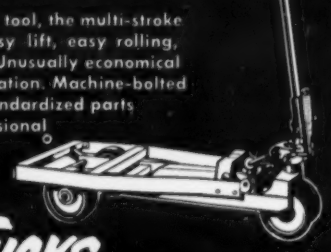
PORTER-CABLE MACHINE CO.
2410 N. Salina St., Syracuse 8, N. Y.

For more details circle NED-955 K4 on enclosed inquiry slip

Hydromatic LIFT TRUCKS
STUEBING DESIGNED • STUEBING ENGINEERED • STUEBING BUILT

multi stroke
safety
and
economy
ease of
operation
speed

Built like a fine machine tool, the multi-stroke Hydromatic features easy lift, easy rolling, quick automatic action. Unusually economical and trouble-free in operation. Machine-bolted frame and machined standardized parts speed and simplify occasional repairs, eliminate downtime.



LIFT TRUCKS INCORPORATED
2423-2431 Spring Grove Avenue • Cincinnati 14, Ohio

For more details circle NED-956 K4 on enclosed inquiry slip

Less than **2¢** *per* **100**

to **SANITIZE GOGGLES** *and* **RESPIRATORS**

Available in 6-oz. bottles, the new high potency CESCO DISINFECTANT CONCENTRATE mixes instantly with water to form a solution which will sanitize safety glasses, goggles, and respirators at a cost of less than 2¢ per 100 articles. It is no more injurious to plastic or metal than water. It is *non-irritating* to the skin and *non-toxic* in normal use. Registered with the U. S. Department of Agriculture.

CESCO CONCENTRATE is easy to use. One ounce poured from the metered bottle makes four gallons of effective solution. After immersion, articles are air-dried and become safe for immediate re-use.

See your CESCO safety equipment distributor or write us for further information.

CHICAGO EYE SHIELD COMPANY
2322 Warren Boulevard
Chicago 12, Illinois

CESCO

For more details circle NED-957 K4 on enclosed inquiry slip

New Literature & Catalogs

Industrial Catalog

Harry Alter Co.—Over 10,000 parts and supplies in the fields of refrigeration, air conditioning, electric motors and controls and heating equipment are contained in fall edition of the "Dependabook." This purchasing guide quotes wholesale prices for use by industrial purchasing officials.

For more details circle NED-958 K4 on enclosed inquiry slip

Roller Chain & Sprockets

Diamond Chain Co.—Complete specifications, selection data, installation recommendations and design and engineering details for line of roller chains and sprockets are found in 64-page illustrated catalog 754. Line includes minimum bore sprockets for reboring as well as finished bore and Taper-lock bushed sprockets which are ready to use.

For more details circle NED-959 K4 on enclosed inquiry slip

Bearing Alloys

Mueller Brass Co.—Fact-filled engineering handbook No. 600 deals with forgings, rod and screw machine products made of nonferrous bearing alloys. Available in six grades, alloys have excellent bearing and mechanical properties, machinability, good nongalling and nonseizing characteristics and high resistance to corrosion. Complete application data are contained in this 24-page book.

For more details circle NED-960 K4 on enclosed inquiry slip

Marking for Shipment

Weber Addressing Machine Co.—A complete shipping systems information kit explains how to use Weber Tab-On stencil to prepare shipments, use of direct-to-container marking system to print facsimile labels and addresses right on cartons, and how to print labels easily. Sample stencils and information on marking and labeling short-cuts are also contained in kit.

For more details circle NED-961 K4 on enclosed inquiry slip

Gearing Guidance

Foote Bros. Gear & Machine Corp.—"Get More for Your Gear Dollars" is 8-page illustrated booklet which depicts product design improvements obtainable through use of Duti-Rated Lifetime gearing. Typical ratings are tabulated, and another chart compares hardness and wear life of standard vs. Duti-Rated gearing. Before and after study shows how 46% reduction in volume and radical decrease in weight was obtained in redesigned transmission.

For more details circle NED-962 K4 on enclosed inquiry slip

Protective Coatings

Magic Chemical Co.—Use of various types of Magic-Vulc rubber coatings to protect industrial equipment from corrosion and abrasion is explained in condensed catalog "Magic-Vulc". Protective qualities of available coatings as well as typical applications are outlined.

For more details circle NED-963 K4 on enclosed inquiry slip

Drafting Room Equipment

Hamilton Mfg. Co.—32-page illustrated catalog and price list No. 14 lists complete information on line of drafting room equipment which includes modern drawing, paper and plan filing equipment; automatic, steel and wood drafting and tracing tables; as well as accessories such as drawing boards, trestles, dust covers and parallel ruling attachments.

For more details circle NED-964 K4 on enclosed inquiry slip

Elevators & Conveyors

Prab Conveyors, Inc.—Line drawings are used to depict various types of automatic elevators; tubular bulk-handling conveyors; steel belt chip-handling units and custom-built bucket, screw, belt, vibrating, pneumatic and chip-handling conveyors and systems. Complete information is given in 32-page catalog No. 370.

For more details circle NED-965 K4 on enclosed inquiry slip

Thermostat Temperature Regulators

Lawler Automatic Controls, Inc.—Comprehensive 12-page engineering bulletin S-6 covering type S thermostatic temperature regulators explains where and when to use direct-acting, reverse-acting and three-way regulators and lists typical engineering specifications. Illustrated with photos, installation diagrams and tables, piece also shows where and how to use single and double seated valves.

For more details circle NED-966 K4 on enclosed inquiry slip

You CAN stop this TAPPING WASTE

Procunier Tappers provide almost automatic tap protection . . .

They are engineered to supply many extra hours of continuous, accurate tapping without frequent "down-time" interruptions. They produce more pieces per hour—with fewer rejections, fewer spoiled pieces and a minimum of broken taps. Their special features include: new double cone, cork faced friction clutch which assures "finger-tip" operation; soft "cushioned" driving and reversing pressure which means longer tap life and greater sensitivity; ball bearing equipped for extra rigidity; heat treated gears that reduce wear during high speed operations; special 3 point balanced gear reversing mechanism which eliminates strain and torsion; smaller—lighter, more accurate trugrip tap holder; and many others.

New "TRU-GRIP" Tap Holder

SEND FOR FREE CATALOG giving full particulars on the complete line of Procunier Tapping Machines. Learn how you, too, can stop excessive tap breakage.

PROCUNIER Safety Chuck Co.
18-20 S. Clinton St., Chicago 6, Ill. Dept. 10

For more details circle NED-967 K4 on enclosed inquiry slip

New TOLEDO PIPE CUTTER
for Cleaner Smoother Cut-offs!

Heavy Duty Wheel and Roller

★ Positive clean-cutting action.
★ Hooks on pipe easily . . . tracks perfectly . . . sturdy malleable frame formed to fit the hand and guaranteed warp-proof.
★ High alloy steel cutter wheels leave practically no burr.
★ Rollers in hook provide a square base when starting tool on pipe. Cuts ⅛" to 2" pipe . . . with speed and ease! Order through your supply house. Write for new catalog. The Toledo Pipe Threading Machine Co., Toledo, Ohio. New York Office: 165 Broadway, Room 1310.

RELY ON THE LEADER! **TOLEDO**
PIPE TOOLS.. POWER PIPE MACHINES POWER DRIVES

For more details circle NED-968 K4 on enclosed inquiry slip

Hotpack HIGH TEMP. BATHS
For Operation from 200° F. to 500° F.
Temperature Differential 5° F.
ALL PURPOSE BATHS WITH A VARIETY OF APPLICATIONS

SPECIFY Hotpack

HIGH TEMP. BATHS for Tempering Metal Cleaning
•
ELECTRIC FURNACES
•
OVENS 12 to 250 cu. ft.
•
TEST ROOMS
•
STERILIZERS
•
STILLS

Drawing or Tempering in Oil or Salt • Cleaning of Metal Parts • Paint Stripping • Melting Compounds and Waxes • Coating or Dipping with Asphalt • Dispersing Nitrogen from Plated Parts.

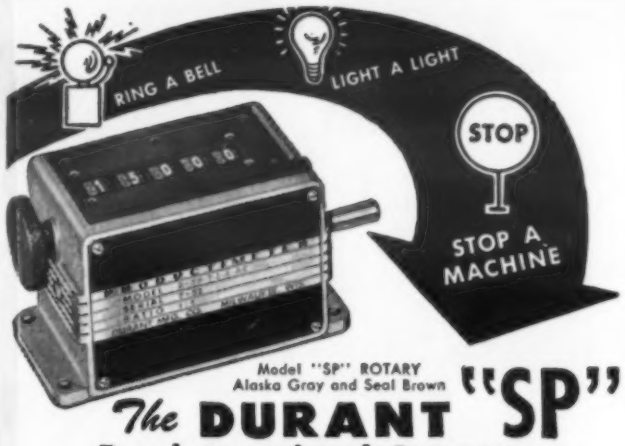
No. 3001

Model No.	Interior Size L W D	Tank Cap	F.O.B. Phila.
3000	12 x 12 x 14	7 Gal.	$245.00
3001	24 x 12 x 14	14 Gal.	285.00
3002	24 x 18 x 14	24 Gal.	425.00
3004	30 x 18 x 14	30 Gal.	550.00

Send for Complete Details

THE ELECTRIC Hotpack COMPANY, Inc.
5063 COTTMAN STREET, PHILADELPHIA 35, PA.

For more details circle NED-969 K4 on enclosed inquiry slip



Model "SP" ROTARY
Alaska Gray and Seal Brown

The DURANT "SP"
Predetermined Counter
(CLOSES SWITCH AT END OF PRE-SET COUNT)

PREVENTS COSTLY OVERRUNS

This SMALL, COMPACT Productimeter has hundreds of applications in all phases of industrial production. Make exact production runs to any predetermined count you set. Extremely rugged, fast and accurate the "SP" Productimeter will eliminate wasteful over- or under-runs. It will turn on a light, ring a bell or stop the machine. Available in ROTARY or STROKE models.

Send for Catalog No. 501

DURANT MANUFACTURING CO.
1922 N. Buffum St., Milwaukee 1, Wis.
122 S. Water St. Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS *Count Everything* 75th ANNIVERSARY

▲ For more details circle **NED-970 K4** on enclosed inquiry slip ▲

Study Motion
it's Simple with the Strobotac®

Machines operating as fast as 100,000 rpm can be observed in S-L-O-W motion with the G-R Type 631-BL STROBOTAC. No mechanical or electrical connection with the equipment being observed is required. The STROBOTAC effectively slows down any repetitive motion . . . even as slow as a small fraction of an rpm . . . so the exact performance of the most complex part can be seen.

Thousands of STROBOTAC's are in use in industry in design, engineering, manufacture, inspection, maintenance and sales.

Priced at $150, this instrument operates from any 115-volt 60-cycle line. Its motion-stopping range is from 60 to 100,000 rpm. In addition, it is calibrated to read directly from 600 to 14,400 rpm for use as an accurate electrical tachometer. Let us tell you more about G-R Stroboscopes. Write for the Stroboscope Bulletin.

STROBOTAC®
Made Exclusively by
GENERAL RADIO Company
275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.
90 West St. NEW YORK 6 *8055 13th St., Silver Spring, Md.* WASHINGTON, D.C.
920 South Michigan Ave. CHICAGO 5 *1000 North Seward St.* LOS ANGELES 38

▲ For more details circle **NED-971 K4** on enclosed inquiry slip ▲

FREE BULLETIN on SURFACE ROUGHNESS tells . . .

- **How to establish roughness specifications** for parts that are in production — and for parts of new design.
- **How to show roughness specifications** on drawings and shop prints.
- **Practical advantages** of surface roughness specification.

ALSO gives tips on MEASURING surface roughness in the shop—and briefly tells why most plants use the PROFILOMETER for doing this.

Write Today!

Ask for BULLETIN L21.

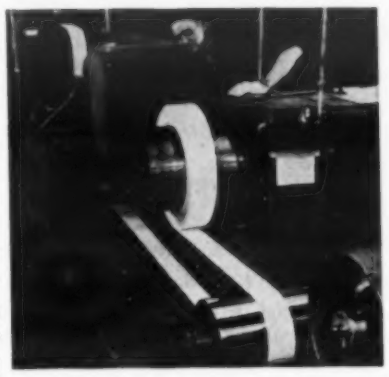
Profilometer is a registered trade mark.

MICROMETRICAL MANUFACTURING COMPANY
345 S. MAIN ST. ANN ARBOR 9, MICH.

▲ For more details circle **NED-972 K4** on enclosed inquiry slip ▲

New Processes & Materials

PREFINISHED METAL STRIP is easy to fabricate



Prefinished in choice of color or finish, Coil - Cote zinc, aluminum or steel strip is supplied in coil form. It can be formed, bent, drawn, pierced and fabricated without cracking, peeling or crazing. Finish is bonded permanently to base metal, and coating actually acts as lubricant to minimize wear on forming dies. Edges of strip can also be coated for complete protection of metal. Strip is available with lustrous color on one or both sides, or with different colors on each side. Coil-Cote is also made without color, but with surface treated for perfect paint adhesion. Engineering service is offered to aid users in the application of prefinished strip to their products. Sample is available from **Andwall Mfg. Co.**, Dept. NED, Ixonia, Wis.

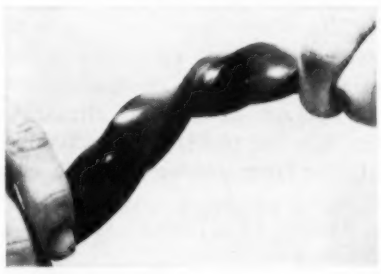
▲ For more details circle **NED-973 K4** on enclosed inquiry slip ▲

CASTINGS SEALANT seals holes, flaws and porous areas

Holes, sand pits, cracks, deep scratches, machining flaws and porous areas in ferrous and nonferrous parts are readily eliminated with Flawmaster sealant. This material assures permanent stoppage of leaks in parts which must be liquid or pressure tight. Easily handled, it is furnished in a kit as a three-component compound. Kit is comprised of a can of resin, bottle of hardening agent and supply of finely pulverized metal. Viscosity can be controlled from a thin liquid to a heavy putty, and sealant cures without shrinkage in a few hours at room temperature. When hardened, it can be machined, sanded or otherwise finished. Made by **Carl H. Biggs Co.**, Dept. B, 2255 Barry Ave., Los Angeles 64, Calif.

▲ For more details circle **NED-974 K4** on enclosed inquiry slip ▲

SILICONE POLYMER for high strength blends with rubber



Rubbery parts with properties intermediate between those of silicone and organic rubbers can be produced by compounding 410 Gum silicone polymer with organic rubbers. Brittle points in range of −70° F and usefulness at temperatures up to 400° F can be realized by proper blending, or application as a protective coating. Polymer can also be blended with oil resistant rubbers to increase their stability in contact with hot oil. Ozone and weather resistance of organic rubber is markedly improved. Tested in ozone atmosphere, 50-50 blend of Buna N. rubber and 410 Gum compounded with proper fillers and vulcanizer showed no cracks after more than 8 hours. Developed by **Dow Corning Corp.**, Dept. IS, P. O. Box 592, Midland, Mich.

▲ For more details circle **NED-975 K4** on enclosed inquiry slip ▲

INDUSTRIAL DETERGENT cleans, sanitizes process equipment

Caustic-free, highly alkaline Planisol industrial detergent will rapidly emulsify all types of oil and leave a chemically clean surface. This nontoxic, noninflammable general purpose detergent will not burn the skin and can be used on wide range of jobs, from cleaning large vessels heavily encrusted with polymerized oil to sanitizing food processing equipment. It has excellent bactericidal properties and a phenol coefficient of 2.0. Planisol cleans, without attacking, aluminum as well as carbon steel, stainless steel and other materials. Tanks washed with detergent and rinsed once with cold water are odor-free. The white granular powder is packaged in 400-lb nonreturnable fiber drums. Developed by **Girdler Co.**, 200 E. Broadway, Louisville 1, Ky.

▲ For more details circle **NED-976 K4** on enclosed inquiry slip ▲

Now! for greater safety

New Safety GRIP-STRUT stair treads custom made to your exact size . . . Here for the first time is a really SAFE stair or ladder step, combining the proven features of Safety GRIP-STRUT material with a double locked carrier plate to provide additional safety over present types.

Made to your own individual size at the factory, the cost is amazingly low . . . you can buy a standard 18" stair tread in lots of 50 for $2.40 each. Prices proportionately lower in greater quantities.

Distributors in all principal cities. Consult your classified telephone directory.

GRIP-STRUT division
The Globe Company
Manufacturers since 1914
4002 S. Princeton Ave. • Chicago 9, Illinois

▲ For more details circle **NED-977 K4** on enclosed inquiry slip ▲

FACTS PROVE

Bendix* Electric Fuel Pump is the outstanding choice for every operating condition!

- **Performance-proven**
- **Longer Life • No Pressure "Droop"**
- **Dependable Operation at −75°F.**
- **Improves Low Temperature Starting**
- **Built-in Pressure Release**
- **Eliminates Vapor Lock**
- **Delivers More Gallons per Hour**
- **Easy to Install • Easy to Service**
- **Low Power Requirements**
- **Economical Operation**
- **Light Weight • Compact**
- **Rugged • Tamper-proof**

Learn more about this new and improved fuel pump. Write for descriptive folder and specifications.

*REG. U.S. PAT. OFF.

ECLIPSE MACHINE DIVISION
ELMIRA, N. Y.
THE NAME Bendix AVIATION CORPORATION MILLIONS TRUST

Bendix* Electric Fuel Pump
Bendix* Folo-Thru Starter Drive Stromberg* Aeroquad Carburetor

▲ For more details circle **NED-978 K4** on enclosed inquiry slip ▲

Air-Operated Toggle Clamps in Automation

Here is a good example of how an air toggle clamp fits into the automatic sequence of piercing and notching. Four Knu-Vise air operated toggle clamps, Model AO-200, are used to clamp and release a large freezer cover automatically, increasing efficiency and economy. Failure of air pressure will not release the clamps, thus eliminating a possibility of scrappage. This operation is a daily performance at Ben-Hur Mfg. Co., Milwaukee, Wisc., and is only one of the many applications to increase production there and in scores of other industries. Perhaps there is a clamping method in your plant that we can make easier and faster. Send for catalog.

Sales offices in principal cities—Teletype DE 49

KNU-VISE PRODUCTS LAPEER MFG. CO.

3062 DAVISON ROAD • LAPEER, MICHIGAN

WESTERN DIVISION: 422 MAGNOLIA, GLENDALE, CALIF.
CANADIAN DIVISION: HIGGINSON ENGINEERING, HAMILTON, ONT.

For more details circle NED-981 K4 on enclosed inquiry slip

Geared to Industry's Production Demands Since 1887

Offering the most complete line of washers available today . . . all types and sizes, all materials, all finishes. More than 25,000 sets of dies. Let us quote on your requirements.

WROUGHT WASHER MANUFACTURING CO.
The World's Largest Producer of Washers
2256 S. BAY ST., MILWAUKEE 7, WIS.

A 7511-1/9

For more details circle NED-982 K4 on enclosed inquiry slip

YOU SHOULD KNOW THIS

GREAT TIME SAVER

FOR BETTER FINISHING

GUSTO ORBITAL SANDER

High efficiency on flat or curved surfaces . . . vertical or horizontal . . . even tight spots right to edges. No belts or gears. Reliable, durable sander for wood, metal, plastics, plaster, paint, etc. Largest sanding pad of any hand sander.

VICTOR J. KRIEG, INC.
Dept. C, 611 Broadway
New York 12, N. Y.

Gentlemen:
Please send full details on GUSTO Sander.
Name
Company
Address
City Zone State

Sold and Serviced in Principal Cities Throughout U.S.A.
VICTOR J. KRIEG, Inc.
Dept. C, 611 Broadway
New York 12, N. Y.
GRamercy 7-5757

For more details circle NED-983 K4 on enclosed inquiry slip

New Literature & Catalogs

Gears & Bronze Parts

Penn Machine Co.—Typical products produced by this firm which specializes in gears, sprockets, shafts, bronze castings and parts are covered in 24-page illustrated brochure. Details of company's planning procedures, engineering facilities, equipment and inspection processes are given.

For more details circle NED-984 K4 on enclosed inquiry slip

Industrial Wheels

Hamilton Caster & Mfg. Co.—"Rolling Resistance" is title of technical study dealing with tests of 39 combinations of wheels, tires, axles and bearings. Described are six basic types of industrial wheels, their relative performance characteristics and the methods of checking the rolling resistance of wheeled equipment.

For more details circle NED-985 K4 on enclosed inquiry slip

Piston-Operated Valve

Golden-Anderson Valve Specialty Co.—Designed for service involving frequent manual opening and closing, G-A Flowtrol valves are actuated by line pressure. Operated easily by one man, valves are available in 2 to 36-in. sizes for water, oil, air and other liquid service at pressures from 15 to 400 psi. Full data are given in 8-page illustrated bulletin W8-A.

For more details circle NED-986 K4 on enclosed inquiry slip

How to Braze

All-State Welding Alloys Co.—Data for brazing shapes, sheet, castings, tubing and assemblies of copper, brass, steel, aluminum and cast iron are found in 24-page illustrated "Brazing Manual." The how-to-do-it book details the practical aspects of brazing and use is made of diagrams to clear up and simplify a number of points.

For more details circle NED-987 K4 on enclosed inquiry slip

Phenolic Resins

Marblette Corp.—Slide-rule principle is used by this conversion chart to show at a glance the amounts of resin and accelerator required to produce a cast phenolic part of any size. Applications for which each phenolic resin is most suitable are shown in another table. Data on physical properties, aid in determining cubic content and other information are on the chart.

For more details circle NED-988 K4 on enclosed inquiry slip

Packaged Boilers

Wm. Bros Boiler & Mfg. Co.—Operational data and specifications for types 1, 2 and 3 packaged boilers, built to meet steam requirements in the medium pressure range, are subject of 8-page illustrated brochure WT-7. Capacities are from 4100 to 30,000 lb of steam per hour. Units burn gas or oil, or a combination of both.

For more details circle NED-989 K4 on enclosed inquiry slip

Power Tool Workshop

Duro Metal Products Co.—16-page illustrated catalog describes, illustrates and gives specifications for power tool workshop consisting of individual single-purpose woodworking tools. Quick-change motor mount permits one motor to operate any number of full-size tools. Shop is composed of 8-in. tilting arbor saw, 4½-in. jointer, 15-in. jig saw, 14-in. drill press and a 27-in gap lathe. Other optional units are described.

For more details circle NED-990 K4 on enclosed inquiry slip

Precision Tumbling

BMT Mfg. Corp.—Metals, plastics, castings and parts of all kinds can be finished by the SlideHoning precision tumbling process, subject of 8-page illustrated booklet 5462. Controlled-motion honing does not affect dimensional tolerances, yet removes burrs, flash, tool marks, rust, paint, etc. Equipment is described and results of process are shown.

For more details circle NED-991 K4 on enclosed inquiry slip

Laminated Plastic

National Vulcanized Fibre Co.—A ten-round battle between "Champ" Phenolite (a laminated material used in making many industrial products) and Ogre Oscar, a personification of production line headaches and low product quality, is described in 12-page brochure. Each round details one or more of the material's qualities. Company facilities and end uses for the material are also covered.

For more details circle NED-992 K4 on enclosed inquiry slip

The best "soft" hammer your money can buy!

JAW-HEAD

Tough, resilient water buffalo faces deliver plenty of power with full protection for delicate parts and finishes. Faces are easily replaced, and comfortable Safety-Flare handle gives you non-slip grip. Work goes better with a C/R RAWHIDE Jaw-Head. See for yourself.

• Available from leading industrial suppliers. Also C/R Rawhide mallets and Rawhide mauls. For further information write Dept. 22

CHANGE FACES IN SECONDS

CHICAGO Rawhide MFG. CO.
1301 Elston Avenue Chicago 22, Illinois
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

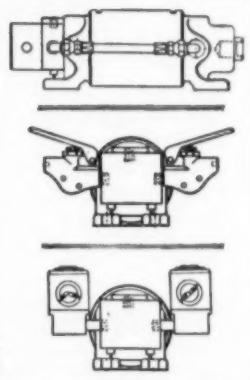
For more details circle NED-993 K4 on enclosed inquiry slip

for designers . . .

NOW A COMPLETE AIR POWER PACKAGE

THE NEW POWER-PACK AIR CYLINDER with BUILT-IN VALVE

CARTER



The ultra-modern power package that gives you your choice of solenoid, poppet, or remote control. Designs into automatic setups easily. Offered in all standard bore sizes and mounting styles . . . stroke lengths to 3 feet. Precision type built-in valve assures accurate control of power. Carter Controls, Inc., 2876 Bernice Road, Lansing, Ill. Phone Lansing 1305.
Delivery One Week on Most Models

SEND FOR COMPLETE INFORMATION ON DETAILS AND SPECIFICATIONS

For more details circle NED-994 K4 on enclosed inquiry slip

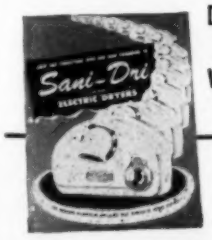
SAVE 85% Of Needless Washroom Expense

NEW, FASTER DRYING Sani-Dri Provides CLEAN, SANITARY SERVICE

SAVES TOWEL COSTS . . . SAVES MAINTENANCE

Save up to 85% of washroom costs with new, faster drying Sani-Dri hand and hair dryers. No buying and storing of paper towels . . . no monthly service fee for cloth towels. Sani-Dri reduces maintenance overhead and provides 24-hour, automatic drying with no clutter . . . no towel waste . . . no fire hazard. All models carry Underwriters seal and 2 year guarantee.

Only Sani-Dri—The Original Electric Dryer Offers So Many Exclusive Features!



WRITE TODAY FOR NEW ILLUSTRATED FOLDER SHOWING COMPLETE LINE

Manufactured and Guaranteed By
THE CHICAGO HARDWARE FOUNDRY CO.
"Dependable Since 1897"
19104 Commonwealth Ave. No. Chicago, Ill.

For more details circle NED-995 K4 on enclosed inquiry slip

DIRECTED AIR FLOW for

FASTER UNIFORM HEATING!

BLUE M STABIL-THERM OVENS

GIVE BEST RESULTS for PRODUCTION for PILOT PLANTS for LABORATORIES

BLUE M'S IMPROVED FORCED DRAFT OVENS NOW HAVE DIRECTED AIR FLOW. TURBO BLOWER CONVECTS TEMPERED AIR VERTICALLY THRU REAR PLENUM CHAMBER. NEW DESIGN—ADDED CONVENIENCE.

- ✓ **Automatic Trigger Control** U.L. App'v'd. ±½°C. Sensitivity
- ✓ **Power Selector Switch** Adjusts wattage in 3 steps.
- ✓ **Temperature Range** 100°F. to 500°F.
- ✓ **Double Wall Design**
- ✓ **Inside Dimensions** 19" W. x 15" D. x 18" H.
- ✓ **Wiring Complete** Meets Nat. Elec. code

MODEL NO. OV-490 Stainless Interior. Enameled Steel Exterior. 115V, 60c A.C. $295.00 complete

MODEL NO. OV-510 All polished Stainless Steel, Type 18-8 $375.00 complete

BLUE M ELECTRIC COMPANY
138th and Chatham, Blue Island, Illinois

For more details circle NED-996 K4 on enclosed inquiry slip

IN ONE MINUTE'S TIME

AWS Class E-6012 electrode produced this fillet.

THIS MUCH MORE WELD

was made in the same time in the same steel plate

with the new AIRCO EASYARC 12 electrode

New AWS Class E-6024

Actual length of welds: E-6012—5 1/16", Easyarc 12—12". Current settings: 230 amps AC for E-6012, 275 amps AC for Easyarc 12. Both welds made in 1/4" mild steel plate with 3/16" diameter electrodes.

Write for "Pocket Guide to Airco Electrodes."

AIR REDUCTION
60 E. 42nd Street
New York 17, N. Y.

Divisions of Air Reduction Co., Inc.
Air Reduction Sales Co.
Air Reduction Pacific Co.
Represented internationally by Airco Company International

For more details circle NED-997 K4 on enclosed inquiry slip

CAN YOU THINK OF A BETTER WAY TO HANDLE MATERIALS?

CONVOY'S CHEMBOARD* SELF-STACKING TOTE BOXES MAY BE YOUR ANSWER

Convoy Boxes are LOW COST, STRONG and LIGHT WEIGHT . . . are made in a wide range of stock sizes and shapes. They weigh and cost less than 40% of steel.

*Chem-Board is Convoy's chemically impregnated corrugated board . . . flint-hard, rock-strong.

Here's an example of Convoy Self-Stacking Boxes speeding production, conserving space, saving money.

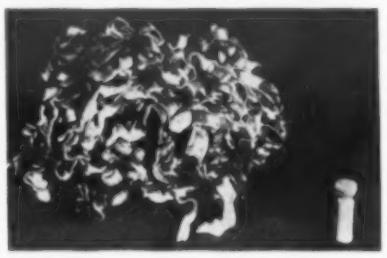
GET IN TOUCH WITH
CONVOY, INC.
CANTON 6, OHIO
P. O. Station B, Box 216-N

STANDARD AND CUSTOM-MADE NESTING, STACKING, and VERTICAL-SIDED CHEM-BOARD TOTE BOXES

For more details circle NED-998 K4 on enclosed inquiry slip

New Processes & Materials

DIAMOND DUST RECLAIMED company service affords savings



Diamond dust can be reclaimed from cloth strips, cotton batten, grinding wheel sludge and other waste by chemical service. Waste is shipped to firm where it is processed and 60 to 95 per cent of dust is reclaimed. It is graded in micron size to specification, analyzed with a spectrograph and tagged with an inspection slip. Dust is then packed 10 carats per ampule and shipped back to customer. Purity of 95 to 100 per cent and cutting efficiency of 90 to 94 per cent is guaranteed. Service offered by **Astra Corp.**, 6165 Mayfield Rd., Cleveland 24, O.

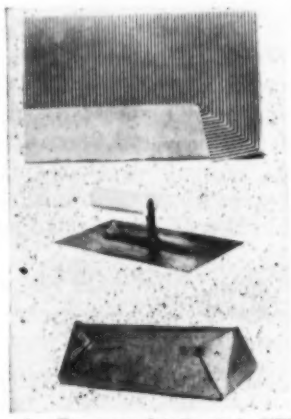
For more details circle NED-999 K4 on enclosed inquiry slip

STAINLESS SPRING WIRE in sizes up to 1/8-in.

Corrosion resistance of stainless steel is combined with elasticity of high-carbon music wire in 17-7 Ph stainless alloy spring wire. Intended for applications where high spring loadings are required under corrosive conditions, wire retains elasticity under continuous exposure to corrosion. Elasticity is obtained by combination of cold work before spring forming and heat treatment after forming. Complete range of diameters up to 1/8-in. is available. Made by **National-Standard Co.**, Niles 17, Mich.

For more details circle NED-1000 K4 on enclosed inquiry slip

CORRUGATED WRAPPING PAPER folds or rolls in any direction



Single-face corrugations of Shellcrease wrapping paper are scored crosswise so that it folds or rolls in any direction. Paper can be used as an inner or outer wrapper for objects of any shape. It is supplied in rolls up to 72 in. wide and 250 ft long, or in sheets cut to order. Available weights are 35, 55, 70 and 100 lb. Made by **Shelton Mfg. Co.**, 591A Ferry St., Newark 5, N. J.

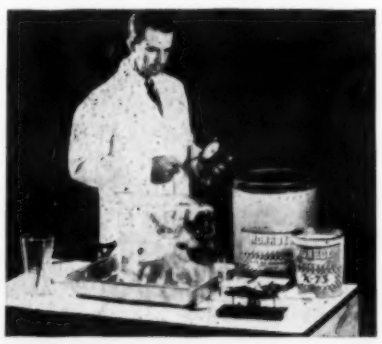
For more details circle NED-1001 K4 on enclosed inquiry slip

BUFFING COMPOUND formulated for extra bar strength

Fast-cutting, clean working Learok Tripoli TP42X buffing composition for all nonferrous metals is formulated to give extra bar strength in automatic buffing with mechanical applicators. Strength of bar is unaffected by elevated summer temperatures. Bar sizes are manufactured to specification in widths of 2 in. or more and any length or shape. Samples are available on request. Made by **Lea Mfg. Co.**, 16-A Cherry Ave., Waterbury 20, Conn.

For more details circle NED-1002 K4 on enclosed inquiry slip

ICE-REMOVING CHEMICAL composition includes rust inhibitor

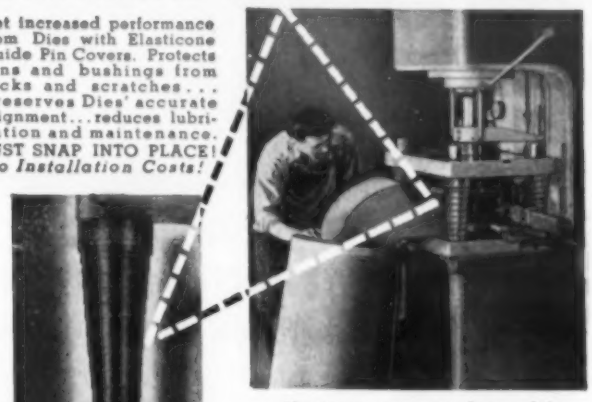


Combination rust inhibitor and heat-retaining agent has been added to X-73 ice-removing chemical. This increases the effectiveness of the compound by approximately 10 per cent and at the same time protects metal surfaces such as auto bodies and gutters against rust action. Compound is available in 100, 200 and 300-lb fiber drums, or in ton lots in 100-lb waterproof bags. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

For more details circle NED-1003 K4 on enclosed inquiry slip

DIE LIFE INCREASED 25% with ELASTICONE GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches . . . preserves Dies' accurate alignment . . . reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*



Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Write for full information and literature.

CENTRAL

2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

For more details circle NED-1004 K4 on enclosed inquiry slip

Specify ESSEX EXTRA TEST TEFLON MAGNET WIRE

WIRE SX PRODUCTS

for Your Highest Temperature Applications

- ★ **CAN WITHSTAND** 250° C for short periods of time; or 200° C continuously.
- ★ **SUPERIOR RESISTANCE** to acids, solvents, chemicals and moisture.
- ★ **GOOD SPACE FACTOR,** flexibility and abrasion resistance.

Teflon is the DuPont trademark for Polytetrafluoroethylene enamel.

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *ATLANTA, GEORGIA, BOSTON, MASS.; *CHICAGO, ILL.; CLEVELAND, OHIO; DALLAS, TEXAS; DAYTON, OHIO; *DETROIT, MICH.; HARTFORD, CONN.; INDIANAPOLIS, IND.; *KANSAS CITY, MO.; *LOS ANGELES, CALIFORNIA; MILWAUKEE, WISC.; MINNEAPOLIS, MINN.; *NEWARK, N. J.; *PORTLAND, OREGON; UPPER DARBY, PHILADELPHIA, PENNSYLVANIA; ROCHESTER, NEW YORK; *ST. LOUIS, MISSOURI; *SAN DIEGO, CALIFORNIA; *SAN FRANCISCO, CALIFORNIA

For more details circle NED-1005 K4 on enclosed inquiry slip

Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

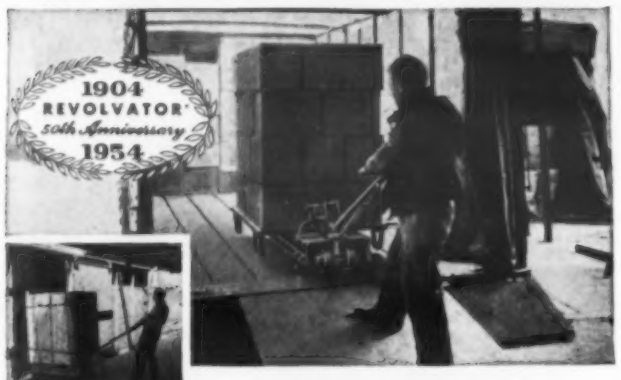
If your problem is high speed coating of paint, varnish, glue, latex, etc.—POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency. Illustrated is a topside or underside coating machine for applying resins, varnish, glues, lacquer, etc. to webs or sheets of paper up to 21"

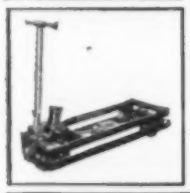
ESTABLISHED IN 1893 POTDEVIN

POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

For more details circle NED-1006 K4 on enclosed inquiry slip





REVOLVATOR
RED-GIANT
features Safety-Ease

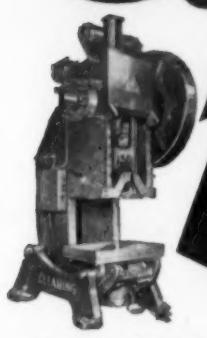
Durability—built in by 50 years of Revolvator Co. experience—is still the fundamental of the Red Giant liftruck line. Maneuverability, plus the safety of their exclusive double stroke mechanism, make the models shown leaders in their fields. There is a Red Giant liftruck available for every use—for every capacity.

Write for the full facts today.

REVOLVATOR CO.
8732 Tonnele Ave. North Bergen, N. J.

▲ For more details circle **NED-1021 K4** on enclosed inquiry slip ▲

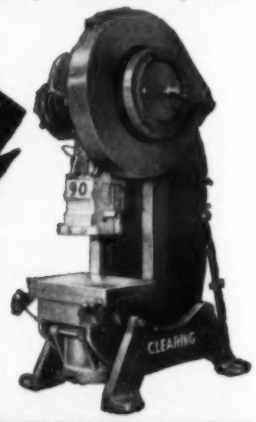
We've taken the delay out of O.B.I. delivery



A New Clearing Manufacturing Policy

Here is another Clearing first. Presses manufactured in advance of sale! Clearing inclinables in practically every capacity are now immediately available for shipment upon order. This time-saving manufacturing and sales policy has been undertaken by Clearing Machine Corporation to take the lag out of delivery.

If you have been considering the purchase of an O.B.I. press, take advantage of this new production and delivery policy. Get in touch with Clearing by mail or telephone today.



CLEARING MACHINE CORPORATION
6494 WEST 65TH STREET • CHICAGO 38, ILLINOIS
HAMILTON DIVISION, HAMILTON, OHIO

▲ For more details circle **NED-1022 K4** on enclosed inquiry slip ▲

HERE ARE 2 SUGGESTIONS:

1. If you do not already know the many advantages of variable transformers over rheostats as a source of continuously-adjustable voltage, be sure to write to Superior Electric.
2. If you have been "shying-away" from variable transformers because of costs, get a POWERSTAT variable transformer price list. You may be surprised how economically you can secure all of its operational advantages for the products you design.

You'll find POWERSTATS better as adjustable a-c voltage controls. POWERSTATS give you the inherent advantages of variable transformer control: cool operation, minimum power cost, "precision-accurate" voltages, long life.

All POWERSTATS have dimensional and wiring features which make them easier to "design into" a product.

POWERSTATS help keep your customers happy. Their ratings are conservative. They always perform as required. Their smoother operation, easier servicing and longer life are "plus" features for your product.

For the best in continuously-adjustable a-c voltage control use variable transformers. For the best in variable transformers always specify POWERSTATS — they are superior.

The SUPERIOR ELECTRIC Company
1810 CLARKE AVE., BRISTOL, CONN.

▲ For more details circle **NED-1023 K4** on enclosed inquiry slip ▲

New Literature & Catalogs

Electric Motor Controls

Furnas Electric Co.—140-page illustrated electric motor control catalog contains engineering and design data on more than 2700 items. Wiring diagrams and application information are given on magnetic starters and contactors, combination starters, control panels, drum controllers, and master, foot and pressure switches.

▲ For more details circle **NED-1024 K4** on enclosed inquiry slip ▲

Engineering V-Belt Drives

B. F. Goodrich Co., Industrial Products Div.—76-page illustrated multi-V belt engineering handbook is convenient guide to the design of standard and high capacity drives. New horsepower rating tables closely approximate actual operating conditions and reflect the increased capacity of modern belts. Tables cover speed ratings from 100 to 6000 fpm. This is a practical guide to the selection and application of V-belt drives.

▲ For more details circle **NED-1025 K4** on enclosed inquiry slip ▲

Industrial Fans & Cyclone Separators

Fort Worth Steel & Machinery Co.—Capacities, dimensions and application data on line of industrial exhaust fans and cyclone separators are presented in illustrated catalog S-2.

▲ For more details circle **NED-1026 K4** on enclosed inquiry slip ▲

Work Center System

Alden Systems Co.—"More Dollars From Less Space" is a 32-page booklet which deals with the new Alden Work Center. Designed to speed assembly, inspection, light manufacturing operations and production, these Work Centers can be individualized with machines, fixtures, assembly bins, etc. to suit production needs. Conveyorized parts and materials flow, stock control and supervision and simplified change in layout are features of equipment which composes this system.

▲ For more details circle **NED-1027 K4** on enclosed inquiry slip ▲

Nonshrink Grouting Mortar

Master Builders Co.—Successful grouting of heavy equipment with Embeco nonshrink mortar is described in 16-page folder. It outlines and illustrates common methods of grouting different types of equipment, mixing and placing of grout, and cold and hot weather grouting. Measurable characteristics of Embeco are detailed.

▲ For more details circle **NED-1028 K4** on enclosed inquiry slip ▲

Rotary Swaging Machine

Torrington Co.—Ten models of "The Torrington Swaging Machine" are illustrated and specified in 38-page brochure of this title. Other highlights include a description of machine's operation, illustrations of typical swaging examples, a general construction drawing and description of fixtures, attachments and dies.

▲ For more details circle **NED-1029 K4** on enclosed inquiry slip ▲

Hydraulic Components

Wisconsin Hydraulics, Inc.—Motors and pumps described in new catalog are available with various mountings in sizes ranging from 8 to 22 gpm at 1000 psi. Large diameter double and single acting hydraulic cylinders in sizes from 5 to 8 in. diameter are also presented. Charts show operating pressures and dimensions.

▲ For more details circle **NED-1030 K4** on enclosed inquiry slip ▲

Insulation Resistance Tester

James G. Biddle Co.—24-page bulletin 21-2023 is descriptive of the Megger heavy duty insulation and resistance tester which is mounted in teakwood case together with dc generator arranged for either hand or motor operation. Standard ratings extend to as high as 50,000 megohms and 2500 v dc. Accessories, as well as other Megger instruments are described.

▲ For more details circle **NED-1031 K4** on enclosed inquiry slip ▲

Rubber Grommets

Goshen Rubber Co.—Listed and illustrated in 16-page file folder 107A are many sizes and types of Goshen grommets available in wide range of natural, synthetic and silicone rubber compounds to specification. Line includes standard AN931 grommet series consisting of 34 sizes, each available with 1/16, 1/8, 3/16 and 1/4-in. groove widths, plus 34 sizes in the web type with 1/16-in. groove width.

▲ For more details circle **NED-1032 K4** on enclosed inquiry slip ▲

Big Shaper Performance Small Shaper Price

The SHELDON 12" Back-Geared Shaper is neither too big, nor too small. It is just right for most shaper work in most tool rooms and shops.

In weight, design features, capacity and performance, it is a "big shaper." In price, operating cost and floor space, it resembles a "small shaper." It is the logical 1st shaper for the small shop and a cost-cutting tool in multiple installations in large plants.

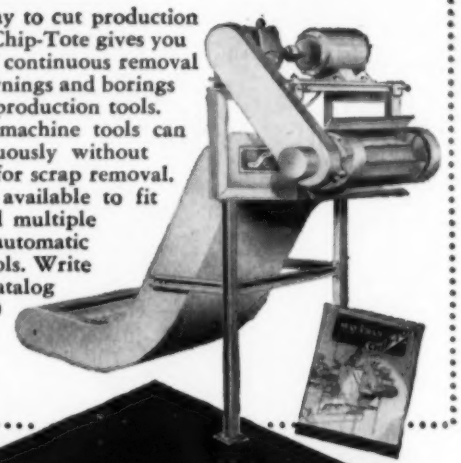
Write for Catalog.

SHELDON
CHICAGO U. S. A.
SHELDON MACHINE CO., Inc., 4215 N. Knox Ave., Chicago 41, Illinois

▲ For more details circle **NED-1033 K4** on enclosed inquiry slip ▲

chip-tote®

Here's a way to cut production costs! The Chip-Tote gives you "hands-off" continuous removal of chips, turnings and borings from high production tools. Automatic machine tools can run continuously without shut-down for scrap removal. Chip-Totes available to fit all standard multiple spindle or automatic machine tools. Write today for catalog No. MF-640 and see the advantages available.



scrap handling

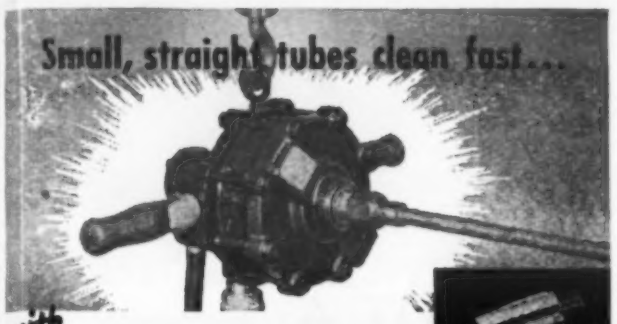
hinged steel belting

Here's a continuous belt conveyor made-up of heavy gauge steel links that are joined by high carbon steel rods. A May-Fran hinged steel belt will gather the turnings and borings from a battery of Chip-Totes or you can use the belt to handle hot, heavy or abrasive castings, forgings, metal blanks, or formed metal parts through production. Write today for No. MF-530 and get full details.

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN
ENGINEERING, INC.
1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle **NED-1034 K4** on enclosed inquiry slip ▲



with
LAGONDA SUSPENSION TYPE CLEANERS

Teamed with the right drill or brush, this suspension type cleaner makes short work of soft or hard deposits in small straight tubes. It can be air or electric driven. The improved motor has two ball-type thrust bearings for absorbing push and pull forces imposed on the cleaner during operation. The "squeeze" trigger control assures instant regulation from wide open to shut off. Brushes are available for light deposits in soft copper or brass tubes. Drills available are illustrated at right. For additional information, call your local Elliott Field Engineer, or write for bulletin to Elliott Company, Springfield, Ohio.

ELLIOTT Company
Y4-10

STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS • CONDENSERS
CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

▲ For more details circle **NED-1035 K4** on enclosed inquiry slip ▲

WHITE
Chemical Porcelain
VACUUM FILTERS

Fast, pure filtrations along with *quick, change over* set-ups are yours when you use "U.S." Chemical Porcelain Vacuum Filters!

Check the 10 big advantages you get with "U.S." Porcelain Filters:

- Maximum corrosion resistance
- High mechanical strength
- Zero porosity — no contamination from previously filtered materials
- Dense iron-free composition . . . no contamination from filter body
- No-seam no-joint construction
- Cleans as easy as a china dish
- Versatility—ideal for quick change-overs, small batch production
- Heat Shock resistance
- Good solution visibility
- Attractive gleaming white appearance

All "U.S." filters are guaranteed to withstand a complete vacuum. "U.S." white chemical porcelain vacuum filters are made in a variety of types and sizes.

243-D

WRITE FOR BULLETIN F-27

U. S. STONEWARE
Akron 9, Ohio

PROCESS EQUIPMENT DIVISION

▲ For more details circle **NED-1036 K4** on enclosed inquiry slip ▲

DEMING VERTICAL TURBINE PUMP

The problem of high costs of factory water supply has been solved by many plants through the installation of Deming Vertical Turbine Pumps. In areas of high rates for central station service, savings up to 60% have been made by Deming Turbine Pumps. In areas beyond city water mains, these dependable pumping units keep water costs at a minimum due to outstanding features of construction and low cost maintenance.

Send for BULLETIN 4700-51
This FREE, illustrated bulletin gives you important facts about the features and advantages of Deming Vertical Turbine Pumps.

THE DEMING CO.
520 BROADWAY
SALEM, OHIO

▲ For more details circle **NED-1037 K4** on enclosed inquiry slip ▲

New Processes & Materials

SILICONE RUBBER ADHESIVE
sets up without pressure in 24 hours

Uniform film of A-4000 silicone rubber adhesive may be used to bond silicone rubber to itself or to aluminum, magnesium, stainless steel, butyl or Saran rubber. Allowed to air dry until tacky, coated parts are pressed firmly together to eliminate air bubbles. Curing takes place without further pressure in 24 hours at room temperature. Maximum bond strength is realized in 3 to 7 days. In general, a stronger bond is formed with extrusions than with molded silicone rubber. Heat and creep resistance are exhibited at temperatures through 100° C. Peel strengths of 15 psi have been obtained between extruded Silastic and aluminum. Made by **Dow Corning Corp.**, Dept. IS, P. O. Box 592, Midland, Mich.

▲ For more details circle **NED-1038 K4** on enclosed inquiry slip ▲

ASBESTOS ROPE
insulates piping, makes packings

Available in 100-ft coils in diameters from ½ through 2 in., Caposite pure asbestos rope is an easily applied insulation for piping, valves, expansion joints and can be effectively used for furnace door and other packings. Lightweight rope weighs 10 lb per 100 ft in the 1-in. size. It is nonrotting and resists acids, can be removed and reapplied repeatedly at temperatures up to 750° F and insulates effectively up to 1200° F. It can also be used for low temperature insulation. Made by **North American Asbestos Corp.**, Dept. N, Board of Trade Bldg., Chicago 4, Ill.

▲ For more details circle **NED-1039 K4** on enclosed inquiry slip ▲

ADHESIVE FILM
for surface bonding of materials

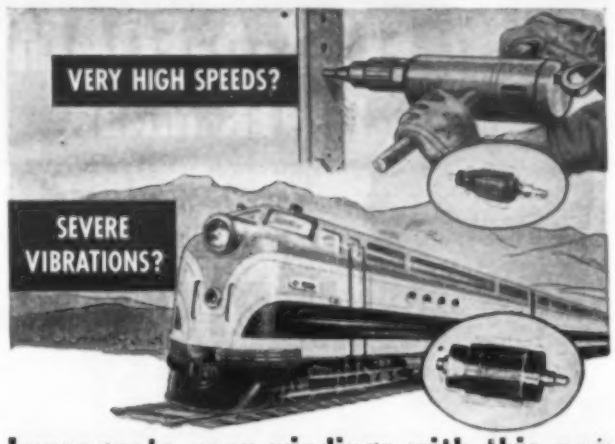
Surface bonding of metal, glass, wood, fabrics and all plastics, except Teflon and polyethylene, can be achieved with Tweezle adhesive film, an unsupported film 0.006-in. thick. Film can be wetted with a solvent which renders surface tacky. Being thermoplastic, it will also adhere with heat and pressure. Current applications include bonding plywood to aluminum and stainless steel for fireproof panels and doors, joining ornaments and plaques to all surfaces, attaching name plates to glass and metal, as gaskets and as sealant for pipe threads. Film is easy to apply, and no excess or spill-over occurs to mar finished object. Developed by **Bond Adhesives Co.**, 547 Johnson Ave., Brooklyn 37, N. Y.

▲ For more details circle **NED-1040 K4** on enclosed inquiry slip ▲

OIL BASE PAINT
thick in can, thin when brushed

Oil base paint, which in the can has thick, jelly-like consistency and will not settle, attains a flowing state under brushing friction. It never has to be stirred or thinned, is ready to use upon opening the can and will not sag or bead on painted surfaces. Brushability and hiding qualities compare favorably with those of conventional paints. Secret of paint is group of vehicles, trademarked Burnok, which can be used in all type flat, semigloss and high gloss enamels. Paints using Burnok vehicles can be brushed, rolled or even sprayed. High color uniformity is also featured. Paint and vehicle developed by **T. F. Washburn Co.**, Dept. 45, 2244 N. Elston Ave., Chicago, Ill.

▲ For more details circle **NED-1041 K4** on enclosed inquiry slip ▲



Impregnate your windings with this new high-strength varnish — IRVINGTON No. 140

Lab tests prove it—field studies confirm it! The exceptional bonding strength of Irvington No. 140 prevents coil movement at high speeds or under severe vibration.

In addition, it offers high resistance to heat, oil and chemicals; excellent electrical properties; unusual stability.

Get the facts on this new Irvington insulating varnish—write for technical data bulletin.

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
14 ARGYLE TERRACE, IRVINGTON 11, N. J.
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle **NED-1042 K4** on enclosed inquiry slip ▲

PREST-O-MATIC *Packaged* DOORS pay for themselves quickly

Dollar cost for a fork lift truck and operator runs high. Don't waste it opening old-fashioned, hand-operated doors. The CLARK PREST-O-MATIC DOOR opens in as little as 3 seconds. Expedites traffic . . . no slowing of truck or operator . . . completely safe . . . improves critical temperature and humidity control . . . prevents drafts. A PACKAGED, COMPLETE DOOR UNIT with highest quality materials, hardware and motor. Two men can install it in three hours. Used by country's largest concerns. Send for new booklet.

CLARK DOOR COMPANY, Inc.
511 Hunterdon St., Newark 8, N. J.

▲ For more details circle **NED-1043 K4** on enclosed inquiry slip ▲

STOP RUST with ONE HAND

Yes, it's as easy as that! Just press the button on the top of the Rust Veto Spray can and metal parts are protected against rust with a clear, durable coating that seals out moisture.

Ideal for protection of parts in storage or between operations; also for tools, dies, jigs and fixtures in tool room. Leaves dry, waxy film that does not have to be removed before further use or processing.

Order a supply today and veto rust with Rust Veto Spray. Attach coupon to your purchase order.

Sold by case only.

E. F. HOUGHTON & CO.
303 W. Lehigh Ave., Phila. 33, Pa.

Please send _____ cases of Rust Veto Spray (1 doz. 12 oz. cans per case) at $15.24 per case f.o.b., Lancaster, Pa.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

N10-54

▲ For more details circle **NED-1044 K4** on enclosed inquiry slip ▲

THE Improved FLEX-A-FOAM FILTER MASK

Your best ounce of protection against IRRITATING DUST

HERE'S WHY:

★ **Workers wear it** Lightweight (just 1 ounce), snug, comfortable and easy-to-breathe through, Flex-a-Foam is the *one* respirator your workers actually *welcome*.

★ **It's super-efficient** Flex-a-Foam's pure latex filter protects against nuisance dust particles 100 times smaller than the eye can see!

★ **It's simple** Only four sturdy, long-wearing parts — all interlocking — all *unconditionally* guaranteed.

★ **And—it's economical** *Low first cost* — less than any other *quality* respirator on the market. *Low upkeep* — washable filter outlasts throwaway type by more than 100 to 1!

Dust Protection Your Workers Will Welcome and *Wear*

SAMPLE STILL ONLY $1.40 POSTPAID

FLEX-A-FOAM® FILTER MASK

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle NED-1045 K4 on enclosed inquiry slip ▲

NEW ELWELL-PARKER "Cargo Scout" Fork Truck

FAST, COMPACT—"Cargo Scout" is ideal for speedy service in congested areas, narrow aisles, inside box cars, road trucks, etc.

LOW OPERATING COST—electric power costs only pennies per day. No fumes, or vulnerable clutch.

360° STEERING plus 57" turning radius gives greater maneuverability.

EASIER MAINTENANCE—all parts instantly accessible for faster lubrication or inspection.

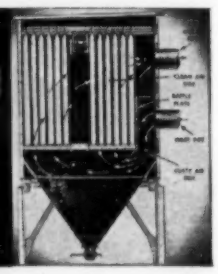
END CONTROL—better vision, safer, easier to get on and off.

TELESCOPING UPRIGHTS. 100" of lift with only 68" overall height, with uprights retracted, and full 50" of free lift.

WRITE FOR FULL DATA on the brand new, 2000 lb. capacity "Cargo Scout". The Elwell-Parker Electric Co., 4096 St. Clair Avenue, Cleveland 3, Ohio.

▲ For more details circle NED-1046 K4 on enclosed inquiry slip ▲

10 ways to get more for your money *in Dust and Fume Control*



Dustube® cloth-tube type collectors provide higher efficiencies at lower cost in practically every dust and fume control application for these 10 money-saving reasons:

1. Cloth tube filtration is nearly 100% efficient.
2. Simplicity of design cuts initial cost.
3. Low power consumption cuts operating costs.
4. Simple installation and inspection cuts maintenance costs.
5. Cloth filter tubes are quickly replaced.
6. All filter tube tension is eliminated.
7. Complete range of fabrics for high temperatures and corrosive applications.
8. Bridging and clogging prevented.
9. Shaking is fast, thorough and automatic.
10. No coarse dusts reach the tube.

Catalog 372 explains these important advantages. Send for a free copy today.

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-1047 K4 on enclosed inquiry slip ▲

New Literature & Catalogs

Air Powered Screwdriver

Ingersoll-Rand Co.—"Production Payoff" is an illustrated 20-page brochure which cites examples of jobs where air powered screwdrivers can speed the assembly of a variety of products. Time, labor and cost-saving data are given for a number of actual applications. Operating mechanism of the tool is explained and specifications for 46 tool sizes are given.

▲ For more details circle NED-1048 K4 on enclosed inquiry slip ▲

Motorized Reducers

Falk Corp.—Selection tables, dimensions, weights, overhung load ratings and thrust capacity ratings required to select horizontal, vertical or right angle Motoreducers are found in 28-page illustrated bulletin 3100. Up to 75-hp units are offered in all-motor or integral design.

▲ For more details circle NED-1049 K4 on enclosed inquiry slip ▲

Better Packing & Shipping

Signode Steel Strapping Co.—Revised, 15th edition of "Guide to Better Packing and Shipping Methods" provides latest information on pallets, bundles and crates in production line packaging. Suggestions on carloading procedures have been revised showing newer loading techniques. Wide selection of strapping tools is illustrated.

▲ For more details circle NED-1050 K4 on enclosed inquiry slip ▲

Heavy Duty Industrial Fans

Robinson Ventilating Co.—Thorough description of construction and classes of type J heavy duty industrial fans is contained in 44-page bulletin 2500 which provides capacity tables for 12 through 132-in. diameter fans. The type J fan is a backward curve unit designed to give quiet, efficient, stable operation through wide performance range with absolute non-overloading protection.

▲ For more details circle NED-1051 K4 on enclosed inquiry slip ▲

Guide to Pattern Buying

Master Pattern & Mold Co.—Those faced with the complex problems of purchasing adequate pattern equipment can make good use of the "Pattern Buyers Guide" offered by this company. Pocket-size guide contains a slide chart which shows pattern recommendations by casting quantity requirements. It is well illustrated and contains a glossary of terms. Also described are lost wax and frozen mercury process dies, shell molding patterns and compression molds for forming of glass fiber reinforced plastics.

▲ For more details circle NED-1052 K4 on enclosed inquiry slip ▲

High Speed Metal Cutting Tools

Equipment Co.—Silver anniversary catalog presents specifications and prices for extensive Altec line of high speed metal cutting tools, including end milling cutters, tapered end mills, angle and roughing cutters, end mills, counterbores, tool bits, combination center drills, metal slitting saws and center and layout dope.

▲ For more details circle NED-1053 K4 on enclosed inquiry slip ▲

Heavy Duty Chain Drives

Morse Chain Co.—Data on capacity rating of Hy-Vo high speed heavy duty chain drives are contained in revised 16-page illustrated catalog C72-51. Operating principles and test data are included for drives that will carry up to 190 hp per inch of chain width at continuous chain speeds up to 6000 fpm.

▲ For more details circle NED-1054 K4 on enclosed inquiry slip ▲

Drill Jig Bushings

Accurate Bushing Co.—8-page illustrated catalog 652 contains data on ASA bushing standards and various types of drill jig bushings offered. Included are headed and headless press fit, fixed and slip renewable, headless and head type liners and accessory parts. Complete specifications are given for each type.

▲ For more details circle NED-1055 K4 on enclosed inquiry slip ▲

Heating Systems & Controls

Illinois Engineering Co.—Five major types of steam heating systems, with or without control, and a line of valves, traps and steam power specialties are described in 20-page illustrated and condensed catalog 110. Featured is the Selectotherm system which is an automatically controlled high vacuum system that adjusts its heat output and fuel consumption to outdoor temperature and heat loss conditions.

▲ For more details circle NED-1056 K4 on enclosed inquiry slip ▲

ASKANIA REGULATOR COMPANY
258 E. Ontario Street, Chicago 11, Illinois
Subsidiary of General Precision Equipment Corp.

▲ For more details circle NED-1057 K4 on enclosed inquiry slip ▲

Turret is accurately positioned IN ONE SECOND by Star-Kimble Brakemotor

Turret and tools on this Warner & Swasey 2AC Machine weigh 1250 pounds—and a standard 1 hp Star-Kimble Brakemotor accurately positions the turret for the next operation *within 1 second!* RAPID TRAVERSE MOTOR is a completely special Star-Kimble design. FOR THE MAIN DRIVE MOTOR—selected by the customer—many 2AC purchasers are specifying a 15 hp Star-Kimble motor specially modified for the application.

Standard and special motors of all types, 1 to 125 hp; generators and motor-generator sets, 1 to 100 kw; marine motors, ½ to 125 hp.

STAR-KIMBLE MOTOR DIVISION
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

▲ For more details circle NED-1058 K4 on enclosed inquiry slip ▲

new method of **process heating** and **cooling**

***saves 50%**

- *in initial cost
- *in heating and cooling time
- *in tank space
- *in maintenance labor

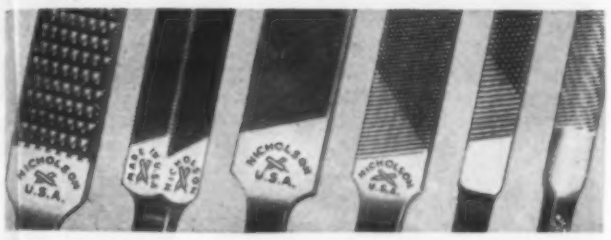
Each member of your buying committee should have this book which tells how Platecoils satisfactorily solve tank heating and cooling problems . . . and at the same time save time, money and manpower.

PLATECOIL REPLACES PIPE COILS

Write for your free copy of Bulletin P57 today!

TRANTER MANUFACTURING, Inc., LANSING 4, MICH.

▲ For more details circle NED-1059 K4 on enclosed inquiry slip ▲



WIDE ACCEPTANCE
proves their merit

Purchasing and production heads like to do business with industrial distributor representatives who have "what it takes." And that, first of all, is GOOD PRODUCTS with WIDE ACCEPTANCE.

There is no better example than Nicholson or Black Diamond files. Through four generations of steadfast quality manufacture, Nicholson has gained world-wide recognition of these outstanding brands.

The variety of file types, cuts and sizes is designed for meeting the growing file requirements of modern production methods, shop practices and metals. Nicholson and Black Diamond files are meticulously made to remove the most metal in the shortest time. They provide the means to save workmen's time and bring filing costs down to an irreducible minimum.

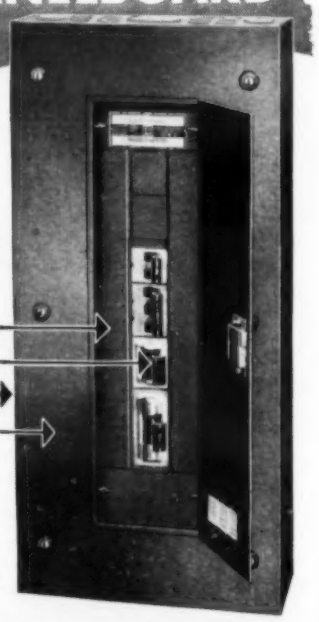
With top user acceptance supporting Nicholson and Black Diamond, why not put all your filing needs in the hands of your nearest Nicholson industrial distributor?

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)

NICHOLSON U.S.A. **NICHOLSON FILES** FOR EVERY PURPOSE

SQUARE D's

MHP DISTRIBUTION PANELBOARD



So easy to order and stock. "Off-the-shelf" delivery of packaged components!

INTERIOR
"PLUG-IN" BREAKERS
BOX
TRIM

for 240 Volt, 3 Phase, 3 or 4 wire power systems.

Write Square D Company, 6060 Rivard St., Detroit 11, Mich., for descriptive bulletin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

▲ For more details circle NED-1060 K4 on enclosed inquiry slip ▲

GENUINE — SIMPLE

SILVER PLATING

"ON THE JOB" WITH POWDER

Purposes of silver plating need not be explained to you of the electrical field.

The biggest problems of silver plating are its convenience, economy and thoroughness. "Cool-Amp" silver plating POWDER is the answer to these problems.

"Cool-Amp" deposits a genuine coat of silver that will not peel off and provides cool maximum conductivity for copper, brass or bronze contacts. It has been proven equal to any electroplating for bolted and stationary contacts and is far more adaptable . . . always ready for use.

"Cool-Amp" POWDER offers a quick and easy solution to heating due to oxidation, improves the continuity of electrical service and reduces maintenance.

"Cool-Amp" is completely harmless to the user and is simple to apply. It can be used by any number of people at the same time. ON THE JOB, in underground vaults and sub stations and in hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

Dampen a rag, dip in "Cool-Amp" and rub on surface. One pound will silver plate approximately 6000 square inches.

$13.50 PER POUND SHIPPED PRE-PAID

WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

GENUINE • SIMPLE SILVER PLATING

COOL-AMP

Dept. ED 8603 S. W. 17th Avenue • Portland 19, Oregon

▲ For more details circle NED-1061 K4 on enclosed inquiry slip ▲

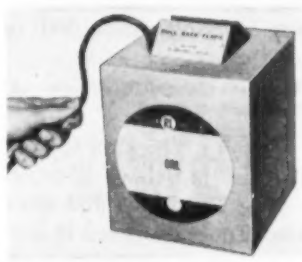
New Processes & Materials

PERFORATED SHEET MATERIALS
nonmetallic, are easily worked

Perforated Standard Acouperf nonmetallic sheet materials are available in ten perforating patterns, ten colors, and in flexible or rigid grades from 0.010 to 0.080-in. thick. They are also available with three - dimensional patterned finish. Materials offer no obstruction to sound passage, and are therefore suitable for use in radio and television industry and for sound reproduction and control. Simple fabrication is feature, since materials can be stapled, nailed, glued, screwed, cut with shears, knife or scissors or outline diecut. Other applications include use as retaining wall for sound-insulation materials and for point-of-purchase displays. Made by **Pearson Industries,** 4624 N. Sheridan Rd., Chicago 40, Ill.

▲ For more details circle NED-1062 K4 on enclosed inquiry slip ▲

V-BELTING
has fabric-neoprene construction



V-belting intended to replace round leather belting for sewing and shoe machines, business machines and printing equipment has fabric and neoprene construction. It features minimum stretch and resists slippage, oil and heat as well as hook pull-out. Belt is completely molded, insuring a uniform cross section. It is offered in 100-ft pull-out package. Splices are easily made with wire belt hooks. Made by **Boston Woven Hose & Rubber Co.,** Dept. NE, P. O. Box 1071, Boston 3, Mass.

▲ For more details circle NED-1063 K4 on enclosed inquiry slip ▲

SPARK-PROOF FLOORING
compounded of rubber and fabric

Spark proof conductive flooring is available for use in hospital operating rooms, laboratories, munitions plants and other places where explosive materials are handled. Compounded of synthetic rubber and fabric, it is long wearing, easy on the feet and dissipates static electricity. Equipment can be rolled easily over the flooring. It is long wearing, easy to clean, meets safety requirements of the National Fire Protection Association and is UL-approved. Made by **United States Rubber Co.,** 1207 Rockefeller Center, New York 20, N. Y.

▲ For more details circle NED-1064 K4 on enclosed inquiry slip ▲

PLASTIC FOAM MATERIAL
liquid type expands with catalyst

Upon addition of a catalyst, liquid Eccofoam FP, a foam-in-place plastic material, expands and finally cures to rigid thermosetting unicellular foam. Uses include void-filling for light weight structural reinforcement, core material for double walled fiber glass laminate radomes and embedment of electronic components and circuits. Material can be processed at room temperature and can be foamed to any bulk density from 2 through 26 lb per cu ft. For 10 lb per cu ft material, compressive strength is 340 psi; modulus of elasticity, 11,000 psi; dielectric constant, 1.18; and dissipation factor, 0.0004. Developed by **Emerson & Cuming, Inc.,** 869 Washington St., Canton, Mass.

▲ For more details circle NED-1065 K4 on enclosed inquiry slip ▲

RAPID ASPHALT PAINT

Spray or Brush—Dries Quickly Protects Any Surface

A quick-drying, glossy black coating. Provides a hard, tough, long-wearing surface. High insulating and moisture-proof qualities. A "must" for equipment that is constantly exposed to acid fumes or dampness. In six sizes from one pint cans to 55 gallon barrels. For metal, wood, masonry, coated fabrics, etc. For literature, write The Ruberoid Co., 500 Fifth Ave., New York 36, N. Y.

The RUBEROID Co.
Asphalt and Asbestos Building Materials

▲ For more details circle NED-1066 K4 on enclosed inquiry slip ▲

NEW most rugged of them all!

KETT Panel Master HEAVY DUTY SAW

GIVES FULL 3/8" DEPTH OF CUT

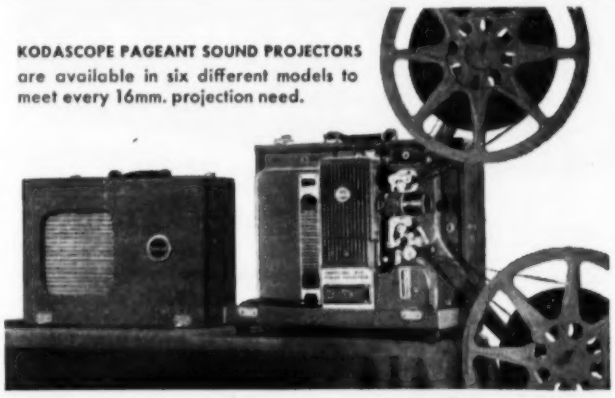
Never before so easy to cut and trim sheets and panels. *Never before* such savings in time and money. Start where you please . . . saw with ease! Two-inch diameter saw blades give full 3/8" depth of cut. Completely redesigned and powered with heavy duty, industrial type 110 volt, AC/DC portable 5/16" capacity electric drill motor, the Panel-Master cuts mild steel up to 12 gauge, aluminum, Fiberglas, plastics and plastic laminates. Ball bearings throughout. Leaves accurate milled finish edge.

Write for Catalog 20

THE KETT TOOL COMPANY
5 East Third St.
Cincinnati 2, Ohio

▲ For more details circle NED-1067 K4 on enclosed inquiry slip ▲

KODASCOPE PAGEANT SOUND PROJECTORS are available in six different models to meet every 16mm. projection need.



Put movies to work
with this trouble-free projector

Movies make almost every type of training or technical information easy to understand . . . easy to use . . . and easy to remember.

You know your movie shows will be successful when you use a Kodascope Pageant 16mm. Sound Projector. Faulty lubrication, the most common cause of projector breakdowns, is eliminated by the Pageant's permanent pre-lubrication. Only the Pageant has this important feature.

Simple, guided threading makes the Pageant unusually easy to operate. Completely portable, projector and speaker fit into a single, handy, lightweight case.

WRITE FOR FREE BOOKLET—"The Kodascope Pageant Sound Projector."

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-1068 K4 on enclosed inquiry slip ▲

HANDLING BULK MATERIALS?

"TAKE IT UP A FLO→TUBE®"

CANTON STOKERS

The spiral conveyor of steady, dependable service. Sturdy cast iron trough bolts together in 3 ft. sections, capped with steel plates for easy removal if ever necessary. Built to take the abuse of coal, yet with tolerances just right to handle materials from grain size to lump.

To fill 3 or more hoppers use gate-valves in Flo-Tube horizontally. Below, filling 2 hoppers with "Y" chute.

Hopper level maintained by 'off-on' automatic switches.

Exposed end for pick-up

CANTON STOKER CORP.

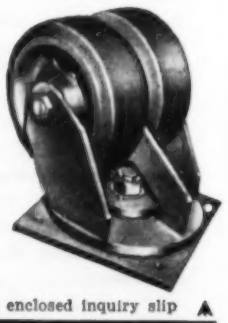
SPECIALISTS IN AUTOMATIC COAL FIRING, HANDLING AND CONTROL EQUIPMENT
102 ANDREW PLACE S. W. • CANTON, OHIO

For more details circle NED-1069 K4 on enclosed inquiry slip

Standard... or Special

• You can depend on Albion Industries to meet your most *exacting* requirements for rugged, dependable industrial casters ... in dozens or thousands.

Albion produces better, yet more economical casters for every conceivable industrial operation. Investigate their advantages today... make Albion your *one dependable source* for casters and wheels.

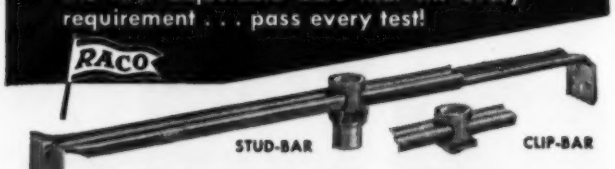


ALBION INDUSTRIES, Inc.
Albion, Michigan

For more details circle NED-1070 K4 on enclosed inquiry slip

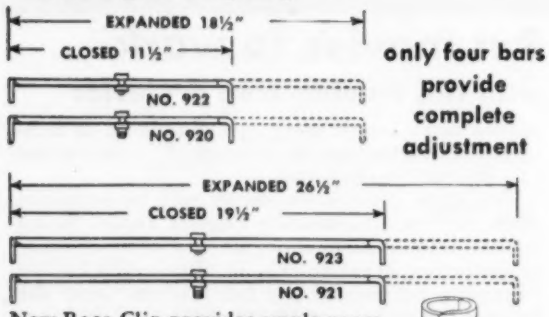
NOW! RACO OFFERS

the first adjustable bars that fill every requirement . . . pass every test!



STOCK JUST 4 BARS INSTEAD OF 16

Only 4 bars enable you to install any electrical switch or outlet box wherever you want it regardless of studding size or spacing.



only four bars provide complete adjustment

New Raco Clip provides ample room for device and added wiring space in all types of electrical boxes.

Write Today for Information on Raco Bar Hangers.

"A BOX FOR EVERY NEED"

ALL-STEEL EQUIPMENT INC., Aurora, Ill.

For more details circle NED-1071 K4 on enclosed inquiry slip

New Literature & Catalogs

Metal Cleaning Machines

Graymills Corp.—Cold solvent type metal cleaning machines which remove dirt, oil and grease from hydraulic and pneumatic parts, bearings, motors, dies, tools and automotive and aircraft parts are subject of 8-page form 444. Featured in piece is new 606 carburetor and metal cleaner which will not leave lingering disinfectant odor, nor produce skin irritation.

For more details circle NED-1072 K4 on enclosed inquiry slip

Rotary Electrical Equipment

About 50 basic types of miniature and subminiature electric motors, blowers and fans are described in bulletin 254 covering rotary electrical equipment. Requests for literature should be on company letterhead to Fred Andrew, Sales Mgr., Mission-Western Engineers, Inc., 132 W. Colorado St., Pasadena 1, Calif.

For more details circle NED-1073 K4 on enclosed inquiry slip

Bushings & Hubs

Dodge Mfg. Corp.—Taper-Lock bushings and hubs described, illustrated and specified in 8-page bulletin A-628A provide interchangeability in sheaves, roller chain sprockets, couplings, conveyor pulleys, silent chain sprockets, fan impellers, gears and flywheels. Data cover bushing numbers, bore sizes, dimensions, weights, keyseats and list prices.

For more details circle NED-1074 K4 on enclosed inquiry slip

Straight Side Presses

E. W. Bliss Co.—20-page catalog 9-D describes and pictures S-1 straight side presses with capacities ranging from 50 to 400 tons. Dimensions, specifications and illustrations of heavy capacity front-to-back shaft eccentric drive presses ranging from 500 to 2000 tons are also included.

For more details circle NED-1075 K4 on enclosed inquiry slip

Torque Wrenches

Richmont Inc.—"Proper Torque" is title of 16-page, illustrated price catalog covering 130 types and sizes of Livermont torque wrenches. Tools are used in aircraft, automobile, electronic and other assembly jobs.

For more details circle NED-1076 K4 on enclosed inquiry slip

Dehumidifying Equipment

Daly, Merrill & Sullivan, Inc.—"Desomatic Equipment for Dehumidification of Air" is 4-page bulletin which details typical methods of dehumidification and describes five dehumidifiers with air flows ranging from 25 to 1500 cfm. A moisture load calculation data sheet and questionnaire form are supplemented.

For more details circle NED-1077 K4 on enclosed inquiry slip

Diesel Engine Lubrication

Sun Oil Co.—Diesel principles and design, types of engines in use, operating cycles, engine accessories and selection of correct diesel lubricants are topics discussed in 48-page revised technical bulletin B-1 entitled, "Lubrication of Diesel Engines." Generously illustrated brochure features a quick-reference trouble-shooting chart which lists remedies for faulty performance.

For more details circle NED-1078 K4 on enclosed inquiry slip

Tubular Steel Scaffolding

Beaver Art Metal Corp.—Descriptions of various parts employed for erection of Advance tubular steel scaffold and materials hoisting towers are found in 16-page illustrated catalog No. 56. Locking feature, typical uses and data on standard panels and accessories are included.

For more details circle NED-1079 K4 on enclosed inquiry slip

Miniature Capacitors

Gudeman Co.—Line of miniature hermetically sealed tubular paper capacitors is subject of 20-page illustrated catalog X-100. Capacitors are high temperature models for use in −55 to 125° F range. Dimensional drawings, electrical characteristics, engineering data and tables of voltages, capacitance values and tolerances are included.

For more details circle NED-1080 K4 on enclosed inquiry slip

Warm Air Space Heaters

Dravo Corp.—Nine ways in which warm air space heaters are used to heat a variety of diversified manufacturing plants are described in this series of 2 and 4-page illustrated case studies. Each covers an individual plant's requirements and lists benefits derived by installing oil or gas fired units.

For more details circle NED-1081 K4 on enclosed inquiry slip

SPRACO NOZZLES

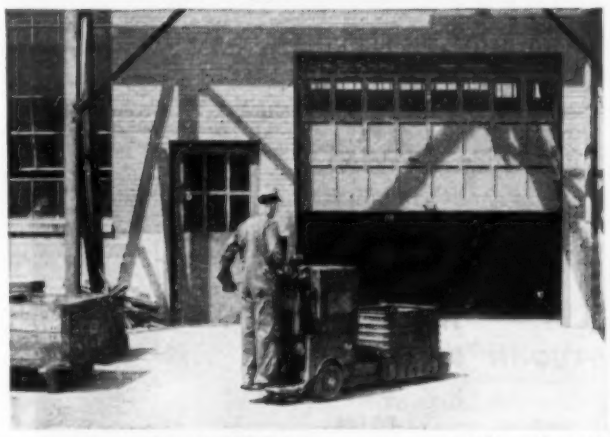
Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-1082 K4 on enclosed inquiry slip

BARBER COLMAN

Barcol® OVERdoors

for rugged industrial use



Barcol OVERdoors operate smoothly and easily because twin torsion coil springs are engineered to balance the exact weight of the door, glass, paint, and every ounce of plated hardware. Add the patented Barber-Colman cam closing action, and your door is sure to be weather-tight yet easy working. To speed plant traffic and save heat, use Barcol electric operators with pull cords or convenient wall switches. Your Barcol distributor sells, installs, guarantees, and services. Look under "Doors" in phone book.

BARBER-COLMAN COMPANY, DEPT. S410, ROCKFORD, ILLINOIS

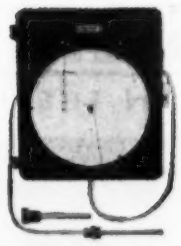
For more details circle NED-1083 K4 on enclosed inquiry slip

PALMER
MERCURY ACTUATED

TEMPERATURE INDICATING INSTRUMENTS

4½" DIAL THERMOMETERS

Made in 3 types to suit any requirements. Rigid stem, wall or flush mounted, 11 inches of scale reading. Interchangeable with standard industrial separable sockets. Stem can be placed at any angle and case can be rotated to any readable position.



RECORDING THERMOMETERS

Twelve inch die-cast aluminum case with black or white wrinkle or satin finish. Single or multiple pen construction. Electric or spring wound clock, 24 hour or 7 Day Revolution. Flexible Armor and bulb of stainless steel. Ranges—40+950°F. or Equivalent in °C.

INDUSTRIAL THERMOMETERS

Red-Reading Mercury—Extruded brass case — chrome finish. Ranges —40+950°F or Equivalent in °C.

RED-READING MERCURY LABORATORY THERMOMETERS

Thoroughly annealed for permanent accuracy. Complete line A. S. T. M. and fractional division types.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio

For more details circle NED-1084 K4 on enclosed inquiry slip

WARMS ANYTHING IN METAL DRUMS UP TO 450°F

Palmer *Automatic* DRUM WARMER

A PORTABLE ELECTRIC OVEN in two models for 55 or for 30 gallon steel drums.

Saves Time—Saves Money. Makes removal from drum by dipping, pouring or pumping, easy and convenient, for any viscous material that handles better when warm.

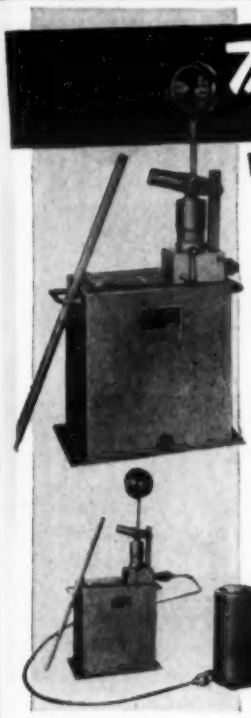
Operates automatically and economically. Two hinged halves, well insulated, fit around drum at point of use—eliminates handling hot drums. Supplied for 115, 208, 230 or 460 volts, single, or three phase. Catalogue, prices and specifications on request. Write today!

HAROLD L. Palmer COMPANY

2980 West Davison Ave., Detroit 38, Michigan, Phone TUlsa 3-1100

▲ For more details circle NED-1085 K4 on enclosed inquiry slip ▲

They're Rugged!



Watson-Stillman Hand Pumps and Hydraulic Jacks

W-S Pumps are available with maximum pressure deliveries of 3,000 to 10,000 psi. Single and double plunger type . . . can be mounted on any size reservoir. Use with light oil, water with soluble oil or plain water. Excellent for operating hydraulic tools, jacks, presses and other hydraulic equipment . . . and for general hydrostatic testing.

W-S Hydraulic Jacks with independent pumps are used for many construction and maintenance jobs. Jack is connected to pump by flexible copper tubing . . . ideal for operation in inaccessible or dangerous locations. Capacities . . . 20 to 500 tons.

Write today for Bulletin A-5.

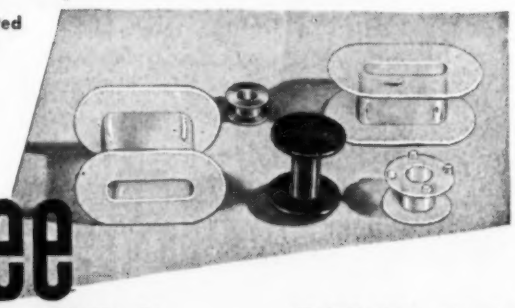
WATSON-STILLMAN FITTINGS DIVISION
H. K. PORTER COMPANY, INC.
1A Roselle, New Jersey

▲ For more details circle NED-1086 K4 on enclosed inquiry slip ▲

See our display—Nat'l. Metal Show: BOOTH 702

for made-to-order precision at mass-production prices

Illustrated Actual Size



see GRC SMALL NYLON COIL BOBBINS

GRC Nylon Bobbins serve you better because they are made to your exact specifications. Yet they cost far less, thanks to Gries' mass-production methods. Bobbins are automatically produced, ready-for-use, in one swift, cost-saving operation. And Gries' unique single-cavity molding technique assures accuracy and uniformity—at prices that afford substantial savings. Send specification for Prompt Quotations on Production runs of 25,000 or more.

MAX. weight .025 oz. length 1"

NO MINIMUM SIZE!

WRITE FOR FULL INFORMATION AND SAMPLES

GRIES REPRODUCER CORP.

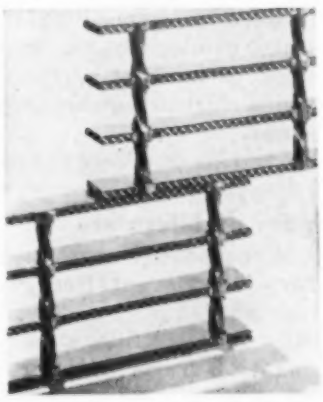
World's Foremost Producer of Small Die Castings

143 Beechwood Ave., New Rochelle, N.Y. Phone NEw Rochelle 3-8600

▲ For more details circle NED-1087 K4 on enclosed inquiry slip ▲

New Processes & Materials

SAFETY GRATING
skidproof qualities improved



Knurled bearing bars combined with twisted cross bars lend an extra margin of safety to relatively smooth walking surface of Furro-Grip electroforged grating. Manufactured from 0.20 maximum carbon steel in standard sizes from ¾ x ⅛-in. to 3¼ x 3 in., grating is intended for use in areas where service conditions include skid hazards. Load bearing characteristics are similar to standard company gratings. Made by **Blaw-Knox Co.**, 2068 Farmers Bank Bldg., Pittsburgh 22, Pa.

▲ For more details circle NED-1088 K4 on enclosed inquiry slip ▲

FAST-SETTING CEMENT
for use as anchoring medium

Heavy-duty vibrating equipment can be conveniently and quickly anchored with Garonite fast-setting cement, which is also suitable for floor-patching or other emergency concrete repairs. Oil-resistant compound sets up sufficiently to permit use of light equipment within 30 minutes of pouring, and of heavy machinery within 1 hr. Compression strength at 1 hr exceeds 5000 psi and at 24 hr exceeds 12,000 psi. Applied cold by mixing with water, compound is shrinkproof during curing and has indefinite shelf life. Made by **Garon Products Co.**, Dept. NE, 37 S. Thirteenth St., Philadelphia 7, Pa.

▲ For more details circle NED-1089 K4 on enclosed inquiry slip ▲

PAINT FLOTATION AGENT
for use in water wash spray booths

Presto-Mat liquid chemical for use in paint spray booths of the water wash type combines with paint sludge to form a floating mat which is easily skimmed from the surface. Added to water in the tank reservoir, it keeps spray booth curtain, nozzles and all metal parts clean. It assures high paint reclamation. Chemical needs no premixing and eliminates sediment. Made by **Chamberlain-Haber Chemical Co.**, Dept. NED, 1105 W. Eleventh St., Cleveland 13, O.

▲ For more details circle NED-1090 K4 on enclosed inquiry slip ▲

DEGREASER! engine shampoo

QT. SIZE CONCENTRATE MAKES 2 GALLONS

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off as easily as you rinse hands under water faucet.

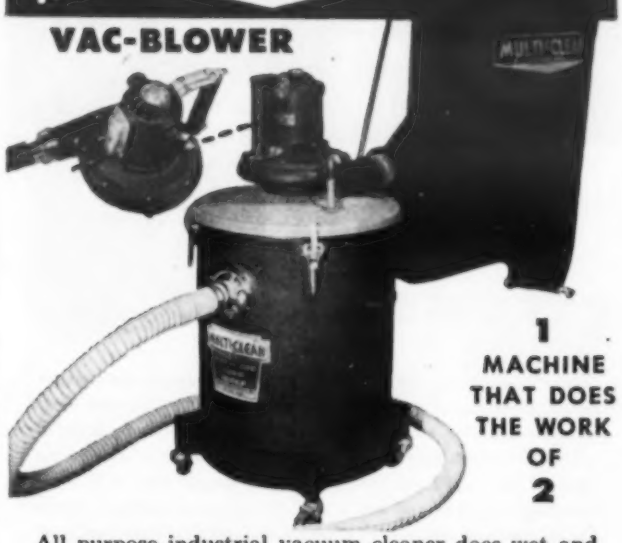
Launders engines faster, more completely, and safer than steam cleaning (warm the engine). Self scouring action brings out factory new appebrance . . . provides accurate visual inspection . . . Gunked engines run cooler.

Get Genuine Gunk in quart and larger sizes at better wholesale auto suppliers throughout the country . . . Flatly refuse imitations.

The CURRAN CORPORATION, Lawrence, Mass.

▲ For more details circle NED-1091 K4 on enclosed inquiry slip ▲

ALL NEW MULTI-CLEAN F-300 VAC-BLOWER



1 MACHINE THAT DOES THE WORK OF 2

All purpose industrial vacuum cleaner does wet and dry pick-up. Lots of power for vacuuming or blowing. Detachable, portable power head and dust bag for hard-to-get-at places. Generous assortment of attachments for every cleaning need. Call your Multi-Clean distributor today or write to Dept. NE-10.

2277 Ford Parkway MULTI-CLEAN® PRODUCTS INC St. Paul 1, Minnesota

▲ For more details circle NED-1092 K4 on enclosed inquiry slip ▲

TO CUT PIPE & TUBING UP TO 12" DIAMETER

"SHOCK STEEL" CUT-OFF WHEELS

Special Shock Steel composition absorbs abuse which causes many wheels to shatter, and gives longer runs between grinds. Precision bevels, and special hardening give you this line of hi-performance wheels for pipe and tube cutting on wall thicknesses including ⅝ inch. Wheel sizes to fit all makes of rotary cut-off machines. Increases production when used as replacement for most abrasive cut-off methods.

$5.25 FOR OUR POPULAR 7"x3/16" WHEEL (Quantity Discounts)

Write for our brochure and price list, and tell us about your cutting problems. Our Special wheels are at work on many an unusual job.

QUICK-SHEAR WHEEL CO.
5240 W. WINONA AVENUE
CHICAGO 30, ILLINOIS

▲ For more details circle NED-1093 K4 on enclosed inquiry slip ▲

NEW CLIP-TYPE Convertible Steel Shelving

- it's rugged
- it's easily installed
- it's quickly rearranged

Berger's new Clip-Type Convertible Steel Shelving combines heavy-duty construction with complete flexibility. Shelves can support tremendous loads—yet be readjusted in minutes to suit current needs. Result: increased efficiency of entire storage and handling system.

Sturdy new shelf clip and stud assure easy shelf adjustment. Simply locate clip at desired shelf height, fasten securely with ½ turn of stud.

For complete information, write for Catalog.

...it's built by Berger

REPUBLIC STEEL CORPORATION
BERGER MANUFACTURING DIVISION
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

▲ For more details circle NED-1094 K4 on enclosed inquiry slip ▲

READ AIR VELOCITIES
instantly...
accurately...
anywhere...

...WITH THE
ALNOR
VELOMETER

Alnor Velometer, a precision-built, self-contained, portable instrument, gives you instant, accurate readings of air velocities anywhere—in plants, mines, mills or laboratories. Measures speed of air flow through ducts, grilles, furnaces, spray booths or in the open. This rugged instrument needs no special care or delicate handling—anyone can use it and get accurate readings. Needs no calculations or reference charts. Available in a wide variety of scale ranges, and with a full assortment of jets and fittings for every application. You'll want full details and prices, so write for Bulletin 2448-G, Illinois Testing Laboratories, Inc., Room 529, 420 No. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-1095 K4 on enclosed inquiry slip

DESIGNED AND DEVELOPED BY SPECIALISTS
FOR PRINTED CIRCUIT SOLDER OPERATIONS

VULCAN "EVEN-DIP" SOLDER POTS

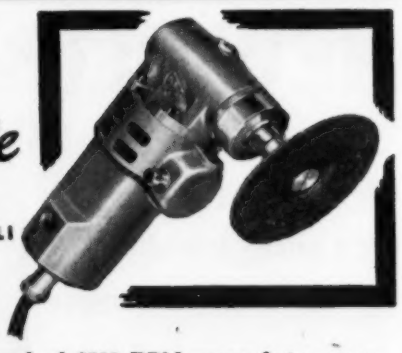
- 16 Crucible Sizes
- High Fidelity thermostat control — adjustable 150-600° F.
- Surface Temperatures do not vary beyond ±2° F. Localized "hot spots" completely eliminated
- Replaceable heavy-duty heating elements

Send For Free, Detailed Specifications

VULCAN ELECTRIC CO., DANVERS 7, MASS.

For more details circle NED-1096 K4 on enclosed inquiry slip

NEW
MODEL C-1
Diskette
THE SUPERIOR, HIGH-SPEED PRODUCTION TOOL!



Free spindle speed of 8500 RPM means faster, more uniform work on metal, plastic or wood in regular production use or for maintenance.

Compact, lightweight design means the Diskette is easier to use, less tiring to the operator. And, because of its high speed operation, there's no need to bear down. Just a light touch, and the machine will do the rest!

Positive control of its cutting action is assured because you hold the power in the palm of your hand. You need no knobs, handles or brackets to guide the Diskette.

BEST OF ALL you can use your Diskette for many different jobs . . . grinding, rotary filing, hole polishing, deburring, sanding, sharpening . . . a special attachment is available for converting the Diskette to a fixed bench machine.

DISKETTE SPECIFICATIONS—average free speed—8500 RPM . . . motor—Universal, AC-DC, 110V. . . . weight—approx. 5 lbs. . . . overall length—9⅛" . . . outside diameter—2¾" . . . disc capacity—4" . . . chuck, ¼", collet type . . . cooling fans—double action.
Complete accessories are available, including safety guards.

Write today for your free illustrated literature and price list.

FRANKLIN BALMAR CORPORATION
Woodberry, Baltimore 11, Maryland
5001 N. Wolcott Ave., Chicago 40, Ill.

DEALERS: Write for open territory details

For more details circle NED-1097 K4 on enclosed inquiry slip

New Literature & Catalogs

Perforated Metals

Diamond Mfg. Co.—Industrial, architectural and ornamental perforated metals in both ferrous and nonferrous compositions are subject of 36-page illustrated catalog No. 39. In addition to showing typical stock patterns of perforated materials, bulletin explains various applications in equipment and machines.

For more details circle NED-1098 K4 on enclosed inquiry slip

Index of Literature

Minneapolis-Honeywell Regulator Co., Industrial Div.—All current Honeywell Industrial Div. literature is listed in 12-page bulletin 100-C. Numbers and titles of all catalogs, bulletins, specification sheets and data sheets covering industrial instrumentation are included.

For more details circle NED-1099 K4 on enclosed inquiry slip

Gas Furnaces, Heaters & Burners

Johnson Gas Appliance Co.—32-page catalog No. 55 illustrates and describes line of burners, hardening and annealing furnaces, valves, torches, mixers, blowers and water warmers. Temperature and safety control equipment is covered as well.

For more details circle NED-1100 K4 on enclosed inquiry slip

Safety Clothing

Pulmosan Safety Equipment Corp.—Complete safety clothing booklet describes full line of asbestos gloves and mittens; chrome leather clothing, including aprons, welding jackets and gloves; and line of Pulmotek vinyl clothing.

For more details circle NED-1101 K4 on enclosed inquiry slip

Aluminum Designation Chart

Kaiser Aluminum & Chemical Sales, Inc.—Handy "Conversion Guide" wall chart shows new four-digit designation system for wrought aluminum and wrought aluminum alloys. Guides indicates old and new designations in easy-to-read bold type and is designed as a permanent reference.

For more details circle NED-1102 K4 on enclosed inquiry slip

Centrifugal Roof Ventilators

General Blower Co.—General description and tabulated delivery ratings for line of centrifugal roof ventilators are featured in 8-page bulletin CRV 101. Capacities up to 50,000 cfm at a 66-in. wheel size are available.

For more details circle NED-1103 K4 on enclosed inquiry slip

General Products Catalog

American Brake Shoe Co.—48-page illustrated catalog "Your Guide to Brake Shoe Products" illustrates representative parts produced by 11 company divisions. Sections on ferrous castings, nonferrous castings, bearing materials, sintered metals, air compressors, welding products, pumps, forgings and railroad products are among the material presented.

For more details circle NED-1104 K4 on enclosed inquiry slip

Short Run Molded Plastics

Dayton Rogers Mfg. Co.—Nylon, Lucite, Plexiglas, Kralastic, polyethylene and many other modern plastics can be economically molded in short run lots by methods described in 8-page illustrated catalog F-242. Six different jobs and their costs are shown by way of illustration. Company production facilities are pictured.

For more details circle NED-1105 K4 on enclosed inquiry slip

Cabinet Lathe

Rivett Lathe & Grinder, Inc.—Steelway precision 9-in. cabinet lathe described in bulletin 918-SLB is available with instant start-stop production drive or a variable speed drive offering instant selection of any speed from 90 to 3750 rpm. The 12-page well-illustrated bulletin shows other lathe features, and displays accessories and attachments for a broad range of work.

For more details circle NED-1106 K4 on enclosed inquiry slip

Standard Forgings

Cleveland Hardware & Forging Co.—40-page illustrated catalog 19A lists dimensions, details, sizes and specifications of many types of stock forgings produced for the industrial and automotive fields. These include levers, rod ends, yokes, eye bolts, hooks and truck and body hardware. Company also has available contract forging facilities for special products.

For more details circle NED-1107 K4 on enclosed inquiry slip

TEST HARDNESS OF ANY SIZE, SHAPE, TYPE METAL . . .
anywhere . . . in one easy motion!

This 30 oz., 3 in. high tester, in 30 seconds, gives direct dial readings on the job. Just press handgrips, read dial.

Accuracy guaranteed by individual calibration. Available in Newage Scales corresponding to:

Rockwell "A" 35-75 Scale	Rockwell "15N" 70-95 Scale
Rockwell "B" 5-100 Scale	Brinell Medium 100-440 Scale
Rockwell "C" 6-70 Scale	Brinell Low 50-260 Scale

Write today for Booklet ET 628 or demonstration in your shop.

NEWAGE INTERNATIONAL
portable metal hardness testers
ERNST PATENT #2536632. MADE IN U.S.A.

NEWAGE INTERNATIONAL, INC., 482 E. 42 ST., NEW YORK, N. Y.
3 Bestobell Rd., Queen Elizabeth Way, TORONTO 14, ONTARIO
DISTRIBUTORS' INQUIRIES INVITED

For more details circle NED-1108 K4 on enclosed inquiry slip

Specify Weatherhead "ERMETO" for LEAKPROOF CONNECTIONS THAT DEFY VIBRATION AND HIGH PRESSURE!

PACKARD SPECIFIES "ERMETO"®

Famous Packard diesel engines for U. S. Navy mine sweepers use Weatherhead Ermeto connectors for positive, leakproof seals.

Get fast delivery from Weatherhead industrial distributors coast to coast

For more details circle NED-1109 K4 on enclosed inquiry slip

New TO CUT YOUR COSTS!

Select the drive that REALLY FITS — no larger — no smaller — from the NEWEST most COMPLETE LINE of Herringbone Reducers Available Anywhere.

CAPACITIES UP TO 1950 HORSEPOWER

W. A. JONES FOUNDRY & MACHINE CO.
473 Roosevelt Road, Chicago 24, Illinois

Our NEW Herringbone Speed Reducer Catalog No. 100 is available from your local Jones Representative, or write directly to us. This new approach to speed reducer cataloging is specially designed to help you select with accuracy and confidence the correct Herringbone Gear Drive for your specific application.

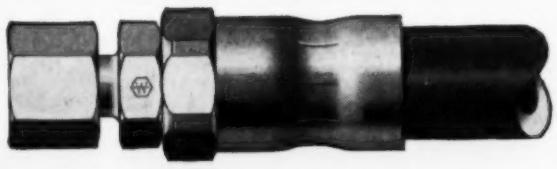
Jones Better Drives ... Since 1890

For more details circle NED-1110 K4 on enclosed inquiry slip

FASTER INSTALLATION

TROUBLE-FREE SERVICE

With Weatherhead Ermeto you install high-pressure injection lines without upsetting tube ends . . . eliminate flaring, threading, welding or soldering on other connections. When the nut is tightened, the patent Ermeto sleeve shears a groove into the outside of the tube to form a positive seal that defies vibration and pressure. You can uncouple and reassemble the joint over and over. Weatherhead makes Ermeto in steel and stainless steel; hose assemblies with Ermeto ends are available on special order. Weatherhead also supplies tools to reseat any standard nozzle or pump for Ermeto connectors.



Ermeto Reusable Hose End

YOU'RE AHEAD WHEN YOU SPECIFY . . . WEATHERHEAD

This trademark appears on every make of car, truck, bus, and tractor on equipment for machine tools, diesel and hydraulic applications on equipment for instrumentation, oil drilling, mining, road building for aircraft, railway, and marine engines for LP-Gas and anhydrous ammonia control equipment this symbol represents more than 1500 products made by Weatherhead

For more details circle NED-1111 K4 on enclosed inquiry slip

New Processes & Materials

RUBBER FLOOR RUNNERS made in interlocking sections

Foot fatigue as well as discomfort of damp, cold floors can be minimized with Airstrip ½-in. thick rubber runners made in interlocking sections. Air-cushioned mats are resilient without being uncomfortably soft and are made in section sizes of 36 in. wide by 24 in. long and 28 in. wide by 36 in. long. Cushions afford heat insulation. Type A is black regular rubber for assembly benches, labs and shipping rooms; type B is black grease and oilproof, acid and chemical resistant rubber; type C is extra heavy duty solid black rubber for use in places of heavy cart traffic; and type D is regular rubber in red, green and blue marbleized colors. Made by **R. L. Mitchell Rubber Co.**, Dept. L, 2128 San Fernando Rd., Los Angeles 65, Calif.

For more details circle NED-1112 K4 on enclosed inquiry slip

TRACING CLOTHS transparency and surface improved

Improved tracing cloths with greater transparency and finer surfaces are designed for speedy drafting and assure sharp prints and long service. Line includes clear, transparent Pencil Cloth White with a good pencil drawing surface; Pencil Tracing Cloth (blue) featuring a satin finish with clear transparency and uniformity of weave; and all-purpose Pencil Tracing Cloth treated for good pencil drawing surface as well as high receptivity to ink. Made by **Arkwright Finishing Co.**, Industrial Trust Bldg., Providence, R. I.

For more details circle NED-1113 K4 on enclosed inquiry slip

CASTING PLASTER for nonferrous metals, forms mold with the permeability of sand

A casting mold with the smoothness of plaster and the permeability of sand can be quickly produced with Hydroperm casting plaster for nonferrous metals. Method calls for blending 100 parts of Hydroperm to 80 parts of water by weight, then whipping sufficient air into mixture to form myriad air cells throughout. These interconnecting air cells act as channels through which steam, as well as air in the mold cavity itself, can escape during metal pouring operation.

A mixer must be used to form air cells with recommended diameter of 1/100-in. and to increase volume of batch from 50 to 100 per cent. Permeability, which depends upon amount of air introduced into slurry, can be varied and controlled to requirements of metal to be cast. It permits metal pouring by gravity and eliminates calcination for more true-to-size molds. Photo shows aerated slurry being poured into assembled core box housing. Developed by **United States Gypsum Co.**, Dept. 136, 300 W. Adams St., Chicago, Ill.

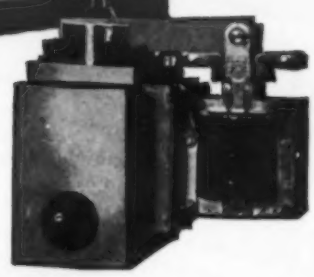
For more details circle NED-1114 K4 on enclosed inquiry slip

DEGREASING SOLVENT used cold, evaporates rapidly

Light oils are removed readily from metal parts by Klearall 95 degreasing solvent. It is used cold, evaporates rapidly and can be redistilled many times. Non-explosive solvent does not support combustion, has no objectionable odor and does not contain carbon tetrachloride. It can be used in a mild steel tank. Made by **Octagon Process Inc.**, 20 Bank St., Staten Island 1, N. Y.

For more details circle NED-1115 K4 on enclosed inquiry slip

High Pressure SOLENOID VALVES . . .



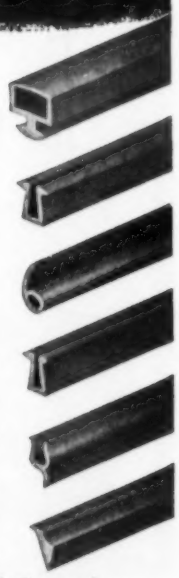
have working pressures range as high as 3000 psi. Specifically designed for remote push button control of hydraulic systems, as well as for the handling of any non-corrosive fluids. Poppet construction eliminates leakage. Impregnated coils are oil and moisture resistant. Unit can be mounted in any position. Available in 110-220 A.C.

Write for illustrated circular H

WATERMAN ENGINEERING Company
725 CUSTER AVENUE
EVANSTON, ILLINOIS

For more details circle NED-1116 K4 on enclosed inquiry slip

EXTRUSIONS TO YOUR SPECIFICATIONS By CONNEAUT



If you need production of extruded plastic shapes, or special plastic compounding to meet unusual product specifications, write, wire or phone Conneaut. We have the experience and facilities to meet your requirements for either or both efficiently, rapidly and economically. At no obligation we'll quote from your prints and specifications, or analyze your problem and make recommendations.

Write for FREE Illustrated Brochure giving complete details on Conneaut's custom service in plastic compounding and extruding.

460-D

CONNEAUT RUBBER & PLASTIC COMPANY
CONNEAUT, OHIO

For more details circle NED-1117 K4 on enclosed inquiry slip

The Case of the FROZEN DRAINS

Solved by WATLOW ELECTRIC HEAT

The Case:

When commercial airlines began flying at higher altitudes, the problem of waste liquids became an acute one. Because food liquids and other watery wastes froze in the drains, they had to be stored in the plane during flight. The result was loss of valuable room and dead weight that cut the carrying capacity of the payload.

The Solution:

The Watlow Strip Unit illustrated here is now standard equipment on many commercial airlines. Requiring little space of its own (only 1" wide x 4" long, curved on a ¾" dia., with rating of 24v, 15w) this unit does the big job of keeping liquids from freezing and the drains free-flowing.

Another case solved by Watlow Electric Heat.

WATLOW ELECTRIC MFG. CO.
Since 1922 — Designers and Manufacturers of Electric Heating Units
1374 FERGUSON AVE.
SAINT LOUIS 14, MO.

HOT PLATES IMMERSION BAND CARTRIDGE

For more details circle NED-1118 K4 on enclosed inquiry slip

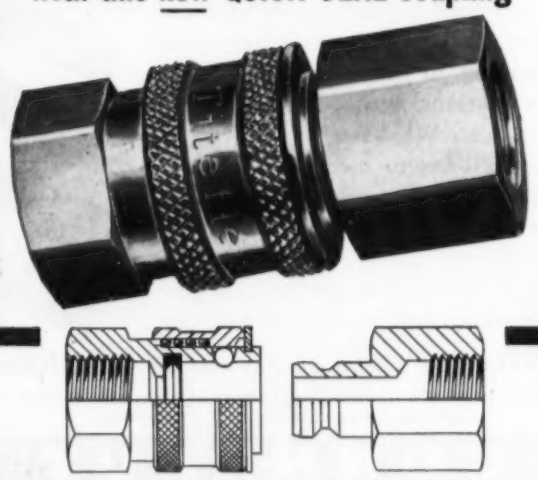
GUARDIAN®
for single units or
COMPLETE CONTROL ASSEMBLIES
Ready to plug in

Plus
A complete line of Switches and Contactors
(Bulletin CS-1) (Bulletin SC-9)

GUARDIAN ELECTRIC
1626-L W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

▲ For more details circle NED-1119 K4 on enclosed inquiry slip ▲

The HIGHER the pressure
the TIGHTER the seal
with this new QUICK-SEAL coupling



- Leakproof at all operating pressures
- Couples and uncouples in ONE SECOND without tools
- 360° swivel stops hose kinking, lengthens hose life
- Smooth bore construction—no restrictions to fast free flow
- Complete range of sizes from ¼" to 12" diameter

Titeflex Quick-Seal Couplings are made in three types—Straight-through, Single and Double Check-valves, in a variety of alloys and many sizes up to 12" diameter.

Write today for Titeflex Quick-Seal Coupling Catalog.

Titeflex
QUICK-SEAL COUPLINGS

TITEFLEX, INC.
Industrial Products Division
507 Hendee Street
Springfield, Mass.
I want to know more about your new Quick-Seal Hose Couplings. Please send complete catalog.

Name.....
Title.....
Firm.....
Address.....
City.....Zone....State.....

▲ For more details circle NED-1120 K4 on enclosed inquiry slip ▲

New Literature & Catalogs

Centrifugal Pumps

Eastern Industries, Inc.—12-page illustrated bulletin 110 describes industrial centrifugal pumps ranging from ⅛ to ¾-hp and delivering up to 70 gpm at from 6 to 65 psi. Specifications on all models, performance graphs, dimensional drawings, instructions on stuffing boxes and mounting diagrams are given.

▲ For more details circle NED-1121 K4 on enclosed inquiry slip ▲

Wire Stitching

Acme Steel Co.—24-page illustrated bulletin AD 131 covers wire stitching corrugated and solid fiber boxes and cartons, with descriptions of possible cost savings, and complete specifications on various machines. Versatility of the wire stitching process is pointed out.

▲ For more details circle NED-1122 K4 on enclosed inquiry slip ▲

Water Jet Eductors

Schutte & Koerting Co.—36-page well-illustrated bulletin 2-M covers water jet eductors for lifting, pumping, mixing and agitating liquids, and for handling solids and slurries. Design, construction, application and operation data are comprehensively presented. Capacities of all standard units are given, and a table shows how to make calculations for special models.

▲ For more details circle NED-1123 K4 on enclosed inquiry slip ▲

Variable Delivery Pumps

Oilgear Co.—Rated up to 3 hp, type A packaged variable delivery pumps are covered in 8-page illustrated bulletin 47010. Designed for straight line or rotary drive applications, pumps are available with eight types of standard controls. Maximum delivery is 1120 cu in. per minute at 1750 rpm. Maximum continuous working pressure is 1100 psi. JIC circuits are shown in the bulletin, together with application guides and other useful data.

▲ For more details circle NED-1124 K4 on enclosed inquiry slip ▲

Pneumatic Conveying Systems

Convair—Line drawings of pneumatic conveying system installations are provided along with brief description of operation in 12-page bulletin 105. Vacuum, vacuum pressure and pressure systems are available and will handle a wide variety of powdery, granulated or grainlike materials.

▲ For more details circle NED-1125 K4 on enclosed inquiry slip ▲

Automatic Boilers

Orr & Sembower, Inc.—"Have You Checked Your Steam Costs Lately?" is title of 16-page cartoon and caption presentation which points up high-cost features of antiquated boiler equipment and the advantages of modern automatic equipment. Installations of steam generators in industrial plants, public utilities, food processing plants and institutions are described and illustrated.

▲ For more details circle NED-1126 K4 on enclosed inquiry slip ▲

Glass Products for Industry

Friedrich & Dimmock Inc.—Application data tables which cover dimensions, weights, wall thicknesses and prices for line of glass products for industry are featured in 16-page catalog 53A. Glass tubing and rod, capillary tubes, low pressure gage glass tubes, oil cup glass cylinders and glass wool fiber used in filtration are covered.

▲ For more details circle NED-1127 K4 on enclosed inquiry slip ▲

Plain & Self-Locking Nuts

National Machine Products Co. — Reductions in weight and material, easier and closer placing of fasteners and wide distribution of driving torque are claimed for 12-pointer nuts described in 12-page illustrated catalog "Something New in Nuts." Design distributes driving loads so that comparatively small OD thin wall socket wrenches can be used without breaking.

▲ For more details circle NED-1128 K4 on enclosed inquiry slip ▲

Pressure Measuring Elements

Foxboro Co.—24-page bulletin 6-10 fully describes line of pressure instruments designed for direct measurement, remote transmission and automatic control and instrumentation of special processes. Application chart shows choice of element materials available. The high pressure helical for recording 80,000-psi pressures and the diaphragm, bellows, spiral and standard helical units covering ranges from 10 in. water to 6000 psi are diagrammed and explained.

▲ For more details circle NED-1129 K4 on enclosed inquiry slip ▲

▲ For more details circle NED-1130 K4 on enclosed inquiry slip ▲

New...Infralite
Convertible
INFRARED HEATER
Only $19.90
The laboratories' most versatile tool!
DRIES • HEATS • BAKES • EVAPORATES, ETC.

• Now you can make your own infrared tests to find how infralite can help improve your production. The unit can be operated from any position and radiant energy can be controlled by rheostat.

9" wide x 9" high x 12" long

MANUFACTURERS OF A COMPLETE LINE OF RADIANT HEATING EQUIPMENT
3190
N. J. THERMEX Company, Inc.
535 BERGEN ST., HARRISON, N. J. HU 5-2323

▲ For more details circle NED-1131 K4 on enclosed inquiry slip ▲

FASTER!
MORE ACCURATE!

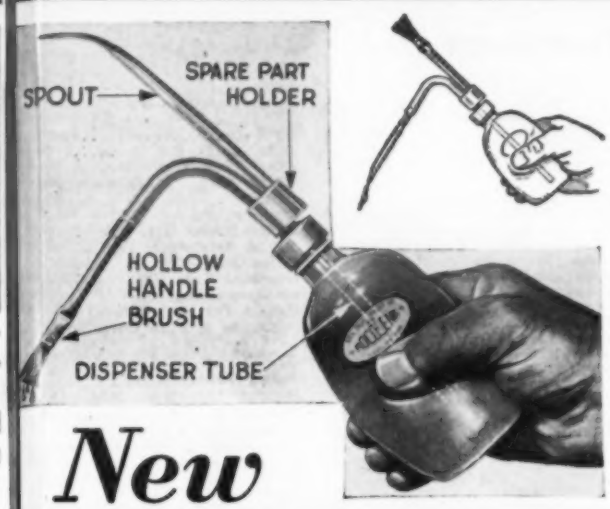
. . . *the* MATEER
Electric Filler

1. ONE FILLER . . . handles liquids, powders, pastes.
2. IT'S FASTER . . . fills up to 240 containers per minute!
3. IT'S ACCURATE . . . 99.7%!
4. IT'S EASY TO MAINTAIN . . . all parts contacting materials can be taken apart, cleaned, replaced in 5 minutes!
5. IT'S FLEXIBLE . . . custom engineered to *your* needs—*one user fills 27 products* with 1 M.E.F.!

Write for our new brochure "How Modern Is Your Filling Equipment?"

G. DIEHL MATEER CO., Dept. 10-4
Lincoln Highway, Devon, Pa.

▲ For more details circle NED-1132 K4 on enclosed inquiry slip ▲



New

NU-AID LIQUID DISPENSER

OILING • INKING • FLUXING • CLEANING
COATING • PASTING • LETTERING

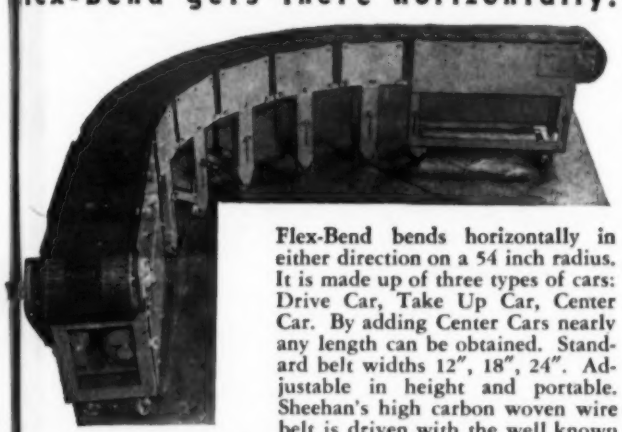
This light, attractive, non-breakable 8-oz. container cannot be harmed by acids, alkalies, oils or solvents. The fluid contents can be brushed or spotted exactly where you want it. All you do is gently squeeze the plastic container to obtain the right amount of fluid, which can be applied through interchangeable brush or spout. Send cash, check or money order for your trial NU-AID DISPENSER, $2.00 postpaid. Quantity prices on request. (Dealer inquiries invited.)

AIDS DEVELOPMENT CO. BOX 2704 CLEVELAND 11, OHIO

For more details circle NED-1133 K4 on enclosed inquiry slip

Sheehan's **FLEX-BEND CONVEYOR**

Place your equipment where you like, Flex-Bend gets there horizontally.



Flex-Bend bends horizontally in either direction on a 54 inch radius. It is made up of three types of cars: Drive Car, Take Up Car, Center Car. By adding Center Cars nearly any length can be obtained. Standard belt widths 12", 18", 24". Adjustable in height and portable. Sheehan's high carbon woven wire belt is driven with the well known Sheehan positive drive spiked pulley. Flex-Bend rolls completely on roller and ball bearings. Cuts down friction, giving long life. Rigidly built, easy to move. Practically maintenance free.

Flex-Bend is sold by the car. Write for literature, and exceptionally low prices.

Conveyors

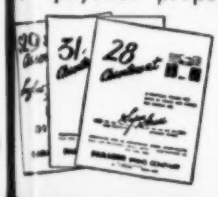
R. T. SHEEHAN CO.

970 N. Territorial Road Plymouth, Mich.

For more details circle NED-1134 K4 on enclosed inquiry slip

Chrome Silicon **DIE SPRINGS**

Paragon's engineers have made every effort to design a die spring assortment in which the springs have exceptional fatigue resistance and stamina. Chrome Silicon alloy steel was first put into use for springs during World War II. By adapting this material the life of a recoil spring automatically increased 20 to 30 times over that made from other high quality steels. Chrome Silicon has high physical properties and exceptional behavior at elevated temperatures. (500° to 600° F.)



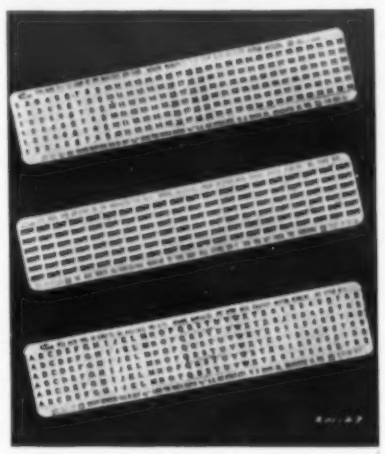
Write for #29 Die Spring Assortment Folder.

PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

For more details circle NED-1135 K4 on enclosed inquiry slip

New Processes & Materials

SELF-ADHERING WIRE MARKERS withstand high and low tempeatures



Permanent, legible identification of wire, circuits, motors, harnesses, coils and panels is possible with All-Temperature wire markers. These self-adhering labels withstand continuous heat to 300° F, intermittent heat to 450° F and continuous cold to −300° F. Markers are mounted on handy round-corner dispenser cards treated with release coating which facilitates removing labels quickly and without distortion. They stick to finger from card to wire, and then adhere permanently to wire. Silicone overcoating protects marker from dirt and moisture. Two stock sizes for small and for over ¼-in. OD wires are available in choice of over 2000 numbers, letters, symbols or colors. Free sample is offered. Made by **W. H. Brady Co.**, Dept. NED, 727 W. Glendale Ave., Milwaukee 12, Wis.

For more details circle NED-1136 K4 on enclosed inquiry slip

CARBON BLOCK & SHEET for impregnation or filter use

Highly porous yet extremely fine grain carbon in block or sheet form is available for impregnation, or for use as filter plates in certain applications. Usual desirable carbon characteristics, such as high electrical conductivity, chemical resistance and stability under high temperatures, are retained despite product's being 75 per cent air. Blocks and sheets range up to about 10 x 10 in. and can be any thickness up to 1½ in. Developed by **Stackpole Carbon Co.**, Dept. NED, St. Marys, Pa.

For more details circle NED-1137 K4 on enclosed inquiry slip

RUSTPROOF COATING is waterproof, high gloss finish

Providing both preservation and decoration of iron, steel and nonferrous metals, Bar-Ox metal protective system excludes both air and moisture. Use of chromate inhibitors further neutralizes tendency of iron to rust or oxidize. Applied by brush, spray or roller, paint dries quickly to a hard, tough waterproof film which has a permanent high gloss. Finish withstands weathering, moisture and corrosive atmospheric fumes. Wide range of colors as well as black and white are available. Illustration of section of window and frame shows how corrosion destroys metal as well as adjoining masonry. Developed by **Truscon Laboratories**, Dept. Ed. 1, Caniff & G.T.R.R., Detroit 11, Mich.

For more details circle NED-1138 K4 on enclosed inquiry slip

CORRECTION

In the description of the type 415 potentiometer it was erroneously stated that this 30 to 125,000-ohm control would maintain rated performance characteristics at ambient temperatures of over 125° F. It actually operates satisfactorily at over 125° C. This ability to perform at a high ambient temperature is one of the principal features of the type 415 potentiometer. Made by **Daven Co.**, Dept. RB, 191 Central Ave., Newark 4, N. J.

For more details circle NED-1139 K4 on enclosed inquiry slip

Troubled with broken floors?

Fix Them Fast With

SPEED PATCH

without halting traffic

World's finest fastest floor fixer! Simply patch holes and truck over them immediately, no waiting. Ready-mixed. Millions of pounds used regularly by industry. Write for details.

Takes only one minute per sq. ft.

ROCK-TRED Corporation
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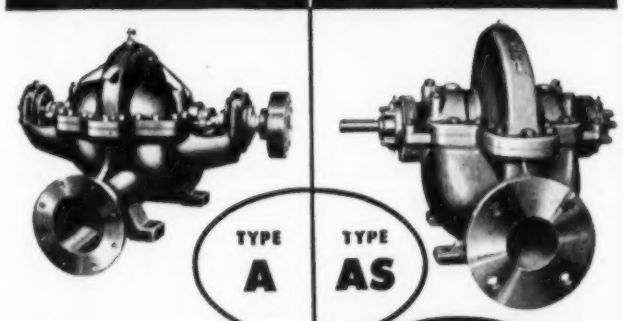

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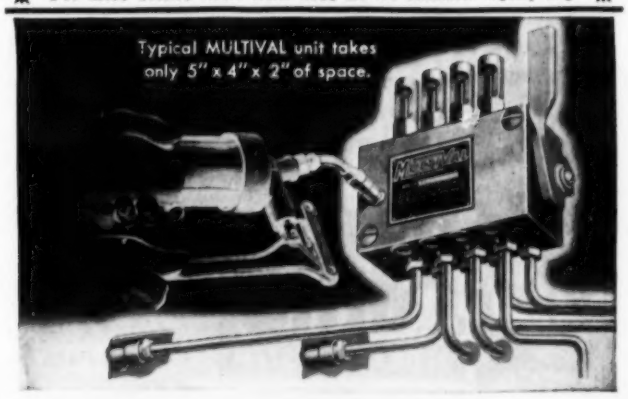

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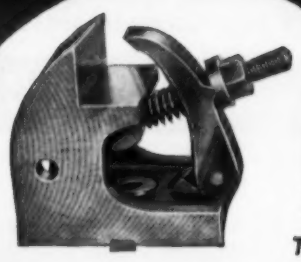

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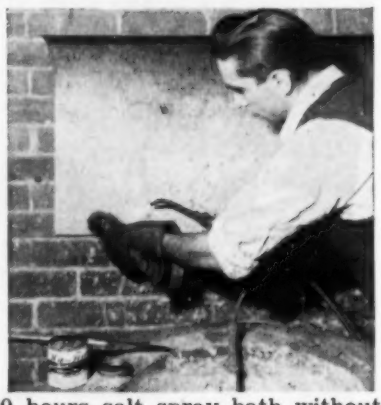

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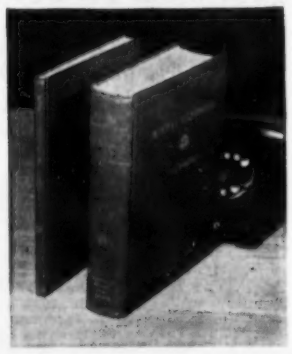

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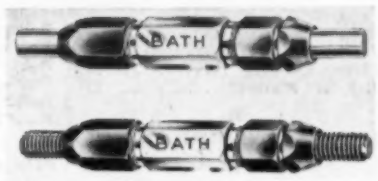

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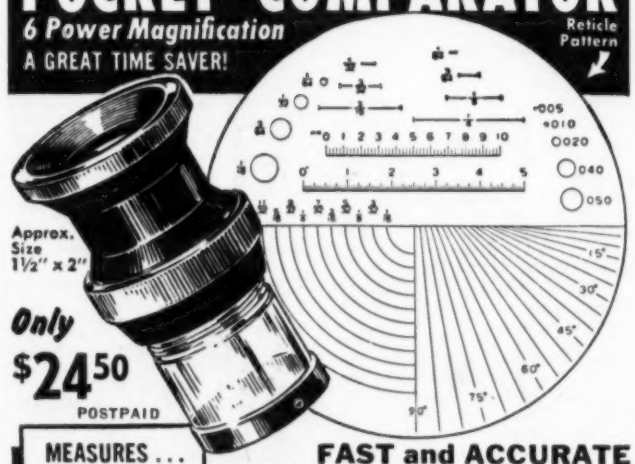

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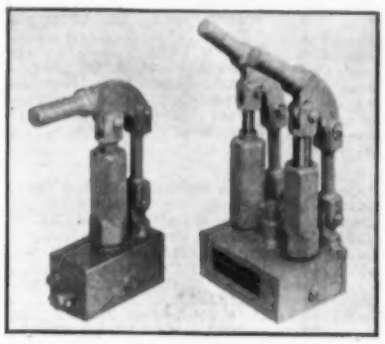

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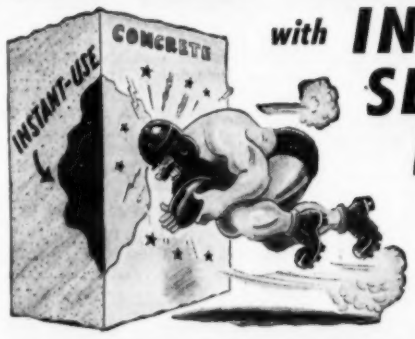

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Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut—tamp smooth—truck over. No waiting! INSTANT-USE bonds tight to old concrete—right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Use indoors or out. Immediate shipment.

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FLEXROCK COMPANY (Offices in principal cities)
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Title .....
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